'THE UGLY AND THE USELESS'

Industry as a Theme in Scottish Art and Aesthetics

1880-1980

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"For industry without art produces the ugly;

art without industry the useless."

Patrick Geddes, Cities and Town Planning Exhibition, 1911

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The thesis proposes that, over the period under discussion, it is possible to detect a distinct tradition of Scottish art and aesthetics which has attempted to interpret the theme of industrialisation within a Modernist context.

The thesis is split into two parts, THEORY and PRACTICE. THEORY traces a tradition stemming from Thomas Carlyle and John Ruskin to the Arts and Crafts Movement and the generalist position re. art and industry, of Patrick Geddes. It then examines the inheritance of Geddes and general debates on the interconnection between art, culture and industry in the writings of Hugh MacDiarmid, Ian Finlay and J. D. Fergusson. This part concludes with William Johnstone's role as a theoretician and educationalist in the context of European contributions to art and industry.

Part Two, PRACTICE, looks first at the series of construction photographs of the Forth Rail Bridge by Evelyn Carey, in the context of the contemporary debate on art and industry within the Arts and Crafts Movement. This also establishes themes of Functionalism and an industrial aesthetic which are carried forward in subsequent chapters. These analyse the major contribution of Muirhead Bone's construction, demolition and wartime graphic work. A related printmaking tradition of industrial subjects is also identified with the Society of Artist-Printmakers, particularly Ian Fleming. Painting's contribution to the theme is analysed in J. D. Fergusson's First World War shipyard scenes, William McCance's art and writings, and the Clyde Group of painters in Glasgow in the 1940s and 1950s. The final chapter looks at the substantial oeuvre of Eduardo Paolozzi, with special reference to his Scottish context and uses of industry in his sculptures and printmaking.

The Conclusion draws together many of the issues raised, seeking to define the scope and establish the strength of the tradition outlined above.

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This thesis is dedicated to my uncle, Cliff Temple (1947-1994)

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INTRODUCTION

The aim of this thesis is to analyse the inter-relationship between two very broad activities, that of art and industry, as they have developed over the last century in Scotland. This has involved a dual approach in order to explain most clearly how this relationship has functioned. Firstly, Part One examines the broad theoretical discussions on this topic as it has been articulated by writers and artists over the period under discussion. The premise underlying all these writings is that we live in a culture that believes that the activities of art and industry are very different, if not in fact opposing. For a variety of reasons, which are analysed in Part One, these writers have sought to question the basis for that division or suggested ways in which art and industry may interact. It has not been my brief to go into the question of whether our culture or these writers have correctly identified the important characteristics of art and/or industry, but to record the theoretical implications of the treatment of an industrial subject in an art form, especially given that art and industry are perceived so differently. This is then expanded upon, using concrete examples, in Part Two, when the work of significant artists who have seriously worked in this area is discussed. Taken together, Parts One and Two bring together the particular theoretical and practical manifestations of industrial subject matter in Scottish art.

The chief question raised in an analysis such as this concerns the strength of an artistic tradition, or closely related traditions, which have developed and renewed its dialogue with industrial subject matter. Have

artists identified industry as a subject requiring a specific approach? Have they sought to make industrial subject matter relate closely to Scotland? Is there a consistent artistic view of industry which has developed in Scotland? Finally, what have been the major artistic achievements and insights into this subject made by Scottish artists? These are broad areas of enquiry which require further preliminary clarification in the remaining sections of this Introduction.

Defining the Territory [1]

The image of Scotland is dominated by two contrasting territories, both relevant to this thesis. They are the landscape of the natural world and the landscape of industry. So much of Scotland's popular identity comes from the notion that it is a land of undisturbed natural growth and ancient traditions. Yet, across the central belt has lain for over two hundred years one of the most congested and advanced industrial landscapes in Europe. Even the image of contemporary Scotland holds both components within it.

This thesis concentrates predominantly on heavy industry and its effects on Scotland as perceived by artists who were born or worked in Scotland. Necessarily, it is the more conspicuous and physically imposing industries which have received most attention from artists. Clearly, the construction industries are of central importance both to Scotland economically and to many of the artists under discussion. This includes civil engineering, particularly bridge-building, the railways, shipbuilding and repairing, mining and quarrying, urban construction, demolition and

renovation, factory work, especially war-time munitions production and other related types of large-scale organised labour. On occasion, and when directly relevant to the artist's work under discussion, representations of agriculture, smithing and general urban imagery are analysed.

The rise and dominance of heavy industry in Scotland can be broadly placed over the two centuries from 1750 to 1950, when industrial processes, organised mass labour and intensive investment became key, although not exclusive, supports of the Scottish economy. [2] Occasionally in these types of subjects attention has been brought to bear specifically on 'labour', that is on the men and women who worked within the industry concerned. It would be misleading to ignore this emphasis in the work, which, in many cases, is implied if not explicitly stated. Further research of a different nature would be required for an accurate social document on the conditions of men and women in industry as depicted by artists.

The economic substructure of Scotland has had an influence on the ways in which industry has been depicted. An indemic, long-term structural decline in the shipbuilding industry was disguised by short-term factors around the end of the nineteenth century, [3] even though the popular conception of prosperity in this industry remained intact until after the First World War and beyond. It is this latter conception of the state of the industry which is usually dominant in the minds of the artists; they do not act as economic fortune-tellers in indicating the future state of the industries they treat, though some have been perceptive in identifying the broadest mood of this country's industrial condition, such as Ian Fleming (see Part Two, Chapter 5).

Questions concerning the exact demands patrons made on their artists in Scotland with direct reference to the effect this had on the quantity and quality of industrial subjects are somewhat outwith the scope of this thesis and would require further research, yet they will be treated when directly relevant to the images examined here. (One could note the inclination on the part of Scottish industrialists to buy works on the advice of dealers often to the detriment of supporting indigenous subjects, especially if they portrayed industry. [4]) Private industrialists tended to pursue a propaganda of silence, in that the art they supported rarely depicted the conditions in which they made their money. As Sydney and Olive Checkland observed of the Glasgow Boys and the Scottish Colourists: "...from neither would it have been possible to guess that they were formed in a society in which industrialisation was the dominant experience." [5]

Underlying the dual focus inherent in this thesis, of art and industry, is the recognition of Western culture's specialisation and its effects on the artist. In an immediate way and from the outset, this was rooted in the artists' training. The academic genre headings of landscape, history painting, domestic genre, still life and portraiture where clearly associated with a world familiar to the artist as an individual and through his or her education as an artist. In contrast, the rise of mass-production and industrialisation was a sphere directly concerned with intensive labour, both skilled and unskilled, and as such remained unfamiliar territory. There was certainly nothing in the art college system that brought the artist into contact with industrialisation.

Broadly associated with this specialisation is the fact that art has been increasingly placed on one side of a variety of dualisms: leisure as opposed to work; personal expression as opposed to communal involvement; progress and experimentation as opposed to normality. Any social role and a responsibility to portray modern experience have become secondary considerations in the popular perception of art. Such a division has had a profound but unquantifiable effect on the actions and attitudes of the artistic community, both in Scotland and elswhere. More often than not it took a conscious decision on the part of the artist to go amongst those who daily worked in industry to react to and explore the industrial environment. Those who did form the basis of this thesis.

As the industrial presence in Scotland has been so prominent, including engineering, shipbuilding, mining, chemicals and textiles, munitions and construction, it is hardly surprising that a great many artists and topographers over time have recorded the outward appearance of industry in their work. However, any inventory of such subject matter, whilst useful, is still to be done and lies outwith the scope of this thesis, although many of these industries are depicted by the artists discussed below. This thesis is not an analysis of heavy or other industries as illustrated by images of them. The work of the artists, not industrial development, is the focus of this discussion.

The evidence suggests that since the 1960s a greater degree of interest in industrial, technological and broader environmental subjects has arisen. This, for example, has found form in Artists-in-Industry projects that have been set up in Great Britain and elsewhere. For

reasons of cohesion, this thesis also leaves that area unattended. Another study could find much material in looking at contemporary art and its relationship to industry. This thesis, however, takes as its finishing point the work of Eduardo Paolozzi, still working at the time of writing, yet a senior and internationally established artist. Younger artists who have followed in this area are not discussed here, but a general impression by this author is that there are at least as many contemporary artists working seriously with industrial subjects as there have ever been over any of the periods under discussion in this thesis.

Industry as Progress

Thomas Babington Macauley wrote, in 1837, of engineering that:

> "It has lengthened life; it has mitigated pain...it has spanned great rivers and estuaries with bridges of form unknown to our fathers...it has extended the range of human vision; it has multiplied the power of the human muscles...it has enabled man to descend to the depths of the sea, to soar in to the air, to penetrate securely in to the noxious recesses to the earth...These are but a part of its fruits, and of its first fruits. For it is a philosophy which never rests, which has never attained, which is never perfect. Its law is progress. A point which yesterday was invisible is its goal today, and will be its starting-post tomorrow." [6]

It is clear to see in such a Utopian, pre-Modernist and poetic evocation of the power of industry what the aesthetic possibilities might be to artists wishing to exploit it. Although not all the artists under discussion here would necessarily share Macauley's enthusiasm, the qualities within industry as a serious and emotive subject have certainly not been lost on them. Nineteenth-century social commentators, such as

Thomas Carlyle and John Ruskin, became very much the moral mouthpieces of the heroic age of industrialisation, and are discussed in Part One. The positive, or at the very least, impressive aspect of nineteenth-century industrialisation in terms of the visual arts is evidenced in Turner's Rain, Steam and Speed (1844) and William Bell Scott's In the Nineteenth Century the Northumbrians show the World what can be done with Iron and Coal (1861).

The impetus of the sciences and industry could be illustrated tangibly in images which show the dominance of industrialisation over the natural world, such as P.J. de Loutherbourg's Coalbrookdale at Night (1801). The dominance once bestowed on nature in many Romantic period paintings was now transformed as an aesthetic into images where industry dominated. Some examples of art in Scotland under discussion here adopt this approach to industry, notably Evelyn Carey's photographs of the Forth Rail Bridge and Muirhead Bone's etchings and drypoints of construction sites, although, as shall be demonstrated, a purely Romantic interpretation of industry did not find many major exponents in Scottish art.

Regardless of the important national element to the idea of progress - Scotland and Britain as a whole could be seen to be progressing as they became more industrialised - as far as many of the artists were concerned, their work was primarily subjective and personal. What their art offered was, in the words of the sociologist Krishan Kumar, "...a powerful image of industrialisation, as a social system and a way of life, that was part fact, part fabrication. In the consequent idea of 'the industrial society' lay not a little of the intellectual's longing for logical purity and the

artist's longing for aesthetic unity." [7] Either consciously or subconsciously the artist was responsible for re-creating his or her industrial subjects in relation to personal feeling, as well as their society's more general perception, thus bequeathing a very particular and not necessarily objective view of industrialisation. This thesis inevitably deals with artists' imaginative interpretations of, and insights on, industry rather than neutrally accumulated data on the subject, although their work does not dwell overly on the merely subjective. This factor should be borne in mind when analysing their works. This personal interpretation also occured, not unnaturally and perhaps more influentially, in the sphere of literature. As Raymond Williams points out, writers such as Dickens, Gaskill, Carlyle, Ruskin and Arnold were engaged in "...a creative working, a discovery;...they were defining the society, rather than merely reflecting it." [8] It seems that a very similar type of process has gone on with the artists discussed here, where the understanding of industry to some extent follows on from, rather than precedes, imaginative working.

Technique

The majority of artists included in this thesis do not work in the traditional painting medium of oil. Exceptions include J.D. Fergusson (discussed in Part Two, Chapter 3) and also James Kay, (1858-1942). Typical subjects of the latter depicted industrial aspects of the Clyde, such as Launch of the Lusitania (1907), and Between the Bridges (c.1925). Kay is not discussed here as his view is predominantly that of a Romantic painter, in the tradition of Turner, yet with little engagement with

Modernist ideas shared by other artists discussed in this thesis. [9] The predominance of the techniques of photography with Evelyn Carey and printmaking with Muirhead Bone, Ian Fleming, William Wilson and Eduardo Paolozzi is certainly significant. The most obvious reason would seem to lie in the fact that the medium of oil is an extremely traditional one and had been developed alongside the dominant aesthetic notions concerning expression and sensibility. This would present heavily associative or dated aesthetic determinates to work within, in the treatment of industrial subjects which in contrast usually point to newness and progress. Freely handled, painterly or Expressionist depictions of industry in Scotland, consequently, are rare, and when they do occur, reflect more often the broader, formal concerns of the artist rather than the subject of industry itself.

An element of mechanisation in the creative act seems a most appropriate component for the interpretation of industrial subject matter. With the photographic technique employed by Carey, the reproductive techniques of etching and lithography use by Bone, and the advanced industrial printing methods used by Paolozzi there is a unity between the modernity of the subjects and the modernity of the technique. The techniques of photography and printmaking have offered a parallel to the modern and innovative aspects of industrialisation not lost on the artists under discussion here.

The suitability of printmaking and photography for reproduction should be noted. Since the earliest print, the repeatable image has had a profound impact on the visual arts, most notably in making imagery more

widely available and cheaper. For instance, Carey's photography of the Forth Rail Bridge, Bone's lithographs during the First World War and Paolozzi's prints have all been circulated soon after they were produced for widespread consumption and were produced with that increased availability in mind. This is not a characteristic of individually produced oil paintings and in many images of industrial subjects using these techniques the preciousness of the experience of industry is inevitable lessened, producing a parallel between the wide availability of these images and the general experience by society of industrialisation.

In connection with the repeatable image is the parallel between this and the products of the modern industrialised economy, which likewise are not unique but capable of mass production and reproduction. Thus, the technique and the imagery itself are to some extent rooted in the same system of production. This becomes even more central a notion in some of the sculpture and printmaking of Paolozzi, where the artist has specifically used an industrial technique or foundry for the making of his work. Similarly important is that because printmaking and industrially-based sculpture is more removed from the human touch, in it is enclosed a metaphor for the depersonalisation of industry itself (see Part Two, Chapter 7).

It may be noted that characteristics of the variety of techniques used are especially suitable to characteristics of industry evoked by the artist. For example, the drypoints of Muirhead Bone have a scrappy, heavily worked quality which parallels the grimness of his construction and shipbuilding works. Equally, the labour evident in the making of the

image on the etching plate evokes the labour explicit in the subject. (A heavily worked oil painting on the same subject, by contrast, would chiefly exhibit an expressive dimension reflecting on the artist perhaps more than the subject, for example, Monet's Gare Saint Lazare (1877), and clearly was avoided by Bone.) Similarly, Paolozzi's use of the serigraph and photogravure, for example, produces smooth, sharply defined shapes which deliberately echo technological hardware, thus offering a complementary technique to that of Bone and other printmakers. Carey, being an exception, was not in a position to choose his medium yet there is here too a compatibility between the rigorous aesthetic of the Forth Rail Bridge's design and the ability of photography as a medium to respond to that quality.

Method

The methodology of this thesis has focussed on a few key approaches, depending on the aims of the relevant chapters, as well as the information already available in the area of research.

Primary sources have been used particularly in Part Two, where detailed discussion of individual artists has been undertaken. Access to correspondence, notebooks, sketchbooks and in certain circumstances to the artists themselves has been a vital source of information. Extensive interviews were carried out with the two most important living artists discussed in this thesis, Eduardo Paolozzi and Ian Fleming, the content of which has been cited in the relevant chapters. This author came across no academic source who has made this specific area of investigation a sole

concern, therefore no recognised expert in the field could be approached for comments. Many historians, curators, artists and relatives of deceased artists were able, however, to offer insights into the broad topic under discussion here and give guidance where appropriate.

In Part One, primary sources were particularly useful in the chapter on Patrick Geddes, given the existence of the Patrick Geddes Centre, founded to document and propagate Geddes' thinking. For many of the other chapters in Part One, notably on the Arts and Crafts Movement and Hugh MacDiarmid, secondary sources were entirely adequate to extract ideas on art and industry as discussed in published sources. Indeed it was the fact that these authors' works were published and generally known which makes them more influential and relevant to the thesis here.

Much of the research, whether from primary or secondary sources, has concerned itself with extracting out either explicit or implicit ideas on the relationship between art and industry from more general discussions. It has been a key task to identify specific passages within a larger body of writing in order to illuminate and understand the author's attitude to the subject. This has been due to the fact that very few writers or artists have written explicitly and at length on art and industry as a specific topic. Examples of this are most clear in J.D. Fergusson's Modern Scottish Painting (1943) with its chapter on "Art and Engineering", Hugh MacDiarmid's Aesthetics in Scotland (1950) and Muirhead Bone's "From Glasgow to London", published in Artwork (1929). In interviews with artists, however, it has been possible to focus solely on this area to clarify attitudes.

NOTES

Introduction

1. It is interesting to note the etymology of the term 'industry'. Notably, the first person to use 'Industry' in its modern sense was the Scots economist, Adam Smith, in The Wealth of Nations (1776) [II, ii. Cited in R. Williams, Keywords, (1976), London: Fontana Press, 1983, p.166] in reference to the institutions established during the Industrial Revolution for production or trade. Similarly, he applied a type of 'machine aesthetic' to economics itself: as Krishan Kumar points out, "Adam Smith's model of the 'natural' economy, in The Wealth of Nations was conceived in the image of a self-balancing machine..." [Prophecy and Progress. The Sociology of Industrial and Post-Industrial Society, Harmondsworth: Pelican, 1978, p.17]

2. There exist many general books, the most useful of which are Michael Moss / John Hume, Workshop of the British Empire. Engineering and Shipbuilding in the West of Scotland, (London: Heinemann, 1977), R.H. Campbell, The Rise and Fall of Scottish Industry, 1707-1939 (Edinburgh: John Donald, 1980), and Sydney and Olive Checkland, Industry and Ethos. Scotland 1832-1914, (Edinburgh: Arnold, 1984).

3. Michael Moss / John Hume, op. cit. p.129

4. Ref. Richard Marks' biography, Burrell. Portrait of a Collector, (Glasgow: Richard Drew, 1983), for a sypathetic analysis of the tastes of Scotland's largest collector. For a more general British perspective on aristocratic and industrialist tastes for ruralism in art and culture, ref. Martin J. Weiner's more critical English Culture and the Decline of the Industrial Spirit 1850-1980, (Cambridge: Cambridge University Press, 1981).

5. Sydney and Olive Checkland, op. cit. p.143

6. "Essay on Bacon", quoted in Kumar, op. cit. p.45

7. Kumar, op. cit. p.48

8. R. Williams, The English Novel from Dickens to Lawrence, London: Chatto and Windus, 1970, p.11

9. For a contemporary discussion of Kay's work see Percy Bate, "James Kay RSW, Painter of the Clyde", Scottish Art and Letters, No.1, Vol.3: Dec. 1903 - Feb. 1904.

PART ONE, Chapter 1

CARLYLE, RUSKIN AND THE ARTS AND CRAFTS MOVEMENT

Towards a Theory of Aesthetics and Industry

The Arts and Crafts Movement is considered here to be a central instigator in confronting the relationship between culture, specifically the visual arts, and industrialisation. This chapter looks at the earlier ideas of Thomas Carlyle (1795-1881), John Ruskin (1819-1900), the Arts and Crafts Movement in general and their relevance in the context of Scottish industry and its interpretation in the visual arts. It would be impossible to do full justice here to the complex set of relationships which formed the Movement's integration of aesthetics, morality and modernisation, but its implications, as described here, can be seen to have important consequences for artists of the twentieth century, including those discussed in this thesis.

It is not proposed here to look at the objects or buildings created under the banner of the Arts and Crafts Movement, but rather to highlight the relevant ideas of its leading thinkers. The most influential commentators relating to our theme here are Carlyle and Ruskin, representing two of the most important and influential critics of industrialisation, attacking it both for its demeaning of the workforce and degrading of the actual end product. Furthermore, they both had strong links with Scotland: Carlyle through birth and residence, and Ruskin through frequent visits and the fact that his father trained under

Alexander Nasmyth. Both expanded upon spiritual beliefs that modernity impinged on morality and, regarding an individual's subjective, emotional condition, the mechanised world did profound harm. Their combined influence in cultural and social spheres in Great Britain is pervasive. The question of the inter-relatedness of morality and modernity posed by Carlyle and Ruskin will in following chapters be seen to underlie the urban and industrial prints of Muirhead Bone and William McCance, as well as being explicitly raised in the art of Eduardo Paolozzi. In this way it can be interpreted that Scottish visual art of the twentieth century was in part predicated on the social criticism of the nineteenth century.

The basic context for the relevance of the Arts and Crafts Movement is well summarised in the following passage by Gillian Naylor:

> "Britain, first in the field as the workshop of the world, was the first to discover that factory conditions are far from ideal, and the realization that technical progress does not necessarily coincide with the improvement of man's lot brought with it the long campaign for social, industrial, moral and aesthetic reform that is still unresolved today..." [1]

The Arts and Crafts Movement's concern with the morality of industrialisation clearly related it to the most broad human and social context; a fact not lost on the great moralisers and thinkers of the period. The most influential of these in the early part of the nineteenth century was Thomas Carlyle, whose writings will be looked at in some depth.

The general view of industrialisation in Scotland, as well as in Britain as a whole, was vitally affected by the writings of Carlyle who, as

Naylor notes, [2] was the first consistently critical writer in Great Britain on the effects of mechanisation. He explored in his essay "Signs of the Times" (1829) [3], the alienation of society through the influence of industry. (This concern, concentrating specifically on the conditions of the labouring classes came to be at the basis of the writings of Karl Marx, whose Das Capital (1867) certainly was indebted to Carlyle's analysis of the plight of the worker under industrialisation.) In persuasive invective Carlyle described the mechanised world as infecting the human condition on all levels: "Men are grown mechanical in head and heart, as well as in hand." [4]

Ruskin was profoundly influenced by Carlyle, yet focussed on the same problem from the different perspective of the artist and his or her alienation from labour and the world in general caused by the extreme effects of industry. The pervasiveness of the industrial world into areas of culture was a central dilemma with its roots at the beginning of the industrial revolution and remained a continuing concern throughout the nineteenth and twentieth centuries. As F.D. Klingender has written: "In effect, the revolution in taste brought about by the industrial pioneers was as profound as the revolution they wrought in the organisation and technique of production." [5] Ruskin showed how he believed industrial progress also infiltrated the stylistic aims of creative artists:

> "Perhaps the first idea which a young architect is apt to be allured by, as a head-problem in these experimental days, is its being encumbent upon him to invent a "new style" worthy of modern civilisation in general, and of England in particular; a style worthy of our engineers and telegraphs; as expansive as steam, and as sparkling as electricity." [6]

This 'modernist' attitude he decried as ridiculous, arguing that only socially concerned architects, and artists in general, with rigid moral standards could produce worthy art. Such an admonitionary passage by Ruskin would lead one to suppose that he opposed a Modernist style for a Modernised period, and that internal moral order was more significant that any artist's outward stylistic absorption of our industrialised world. It is this very point, the disjunction or otherwise between humankind's inner state and its surrounding environment caused by modernisation which is at the heart of visual artists' urge to tackle industry in their art. Evidence of this can be found in the art of Muirhead Bone, William McCance and Eduardo Paolozzi.

For Ruskin, an artist's creative production and his own internal well-being were critically interconnected. Industrialisation was seen to have created a schism in this supposed unity and it was the breakdown between internal and external experience which the Arts and Crafts Movement sought to remedy. One problem, identified by Ruskin, was that the designer of the product was rarely, since the introduction of industrial production, the actual maker of the product.

> "We are always in these days endeavouring to seperate the two, we want one man to be always thinking, and another to be always working, and we call one a gentleman, and the other an operative; whereas the workman ought often to be thinking, and the thinker often to be working...the mass of society is made up of morbid thinkers, and miserable workers." [7]

As Klingender observes:

> "Once design became the specialised task of the 'artist', who did not himself actually work at the wheel or bench or lathe, the spontaneous taste of the craftsman was inevitably undermined.

> Instead his inventiveness showed itself in the solution of technical problems of execution. Hence the division of labour resulted, not only in marked changes in the level of design, but also in changes in the level of manufacturing technique." [8]

It was in part the intention of the Arts and Crafts Movement to rectify this split by educating the individual to be familiar with both design and execution.

We now turn to those who, in the latter part of the nineteenth century, continued the discussion initiated by Carlyle. The degradation that accompanied industrialisation was still a point of issue for Walter Crane, a central figure in the Arts and Crafts Movement, who wrote in "The Revival of Design and Handicraft" (in Arts and Crafts Essays, 1893):

> "The movement...represents in some sense a revolt against the hard mechanical conventional life and its insensibility to beauty (quite another thing to ornament). It is a protest against that so-called industrial progress which provides shoddy wares, the cheapness of which is paid for by the lives of their producers and the degradation of their uses." [9]

Crane is also of relevance in that he brought in Joseph Pennell, the American contemporary of Muirhead Bone, member of the Art-Workers Guild and a fervent exponent of industrial imagery, as a book illustrator (see Part Two, Chapter 2). [10]

A fundamental objection to industrialisation held by Carlyle was that it intervened between the worker and his product: "The shuttle drops from the fingers of the weaver, and falls into iron fingers that ply it faster."

[11] Reacting to the implications of that observation, William Morris became one of the most active in attempting to re-introduce craft skills back into the production system. However it would be wrong to view him as insensitive to the benefits provided by machine production. He stated, in "How We Live and How We Might Live" (in Signs of Change, 1888), that for "...people of the artistic turn of mind, machinery is particularly distasteful, and they will be apt to say you will never get your surroundings pleasant so long as you are surrounded by machinery. I don't quite admit that; it is the allowing of machines to be our masters, and not our servants, that so injures the beauty of life nowadays." [12] Clearly, even the most suspicious critics of industrialisation had, by the end of the nineteenth century, accepted the intervention of the machine.

The potential utility of machine production was accepted by two prominent Arts and Crafts thinkers, Charles Robert Ashbee (1863-1942) and William Richard Lethaby (1857-1931), thus marking a transition into modern industrial design, continued by William Johnstone's teaching (see Part One, Chapter 5). Ashbee wrote, in Should We Stop Teaching Art? (1911),

> "It is often supposed that there cannot be beautiful machine products, or that the beauty of a mechanical object lies in its conformity to the standard of a hand-made piece. But experience does not bear out this supposition. In modern mechanical industry "standard" is necessary, and "standardisation" is necessary. The principle in each is sound and the community needs both." [13]

Also on the same theme: "Modern civilisation rests on machinery, and no system of endowment, or the encouragement, or the teaching of art can be sound that does not recognise this." [14] For Arts and Crafts theorists

who accepted the existence and use of the machine, the need was for good aesthetic standards to prevail in industrial design. This task resulted in close contact between the spheres of art and of industry. The aim, in short, was to reconcile individual creativity with the facts of industrial production. Key tenets of the Arts and Crafts Movement such as truth to materials and functionality were to be absorbed into the factory system and mass production. [15] Perhaps due to the philosophical duality set up by Carlyle especially, and continued by Ruskin, between the 'inner' life of the individual and the external, communal life around that individual, the Arts and Crafts Movement did not really solve this equation between "subjectivity" and "standardisation", and momentum shifted to Europe and the efforts of the Bauhaus artists and theorists, Le Corbusier and the Russian Constructivists to develop integrated solutions to the problems of aesthetics within industrial production. Debates around functionalism also continued in London in the first decade of the twentieth century, and provide the context for Muirhead Bone's functionalist approach (discussed in Part Two, Chapter 2), thus pointing to a continuity of thought from Arts and Crafts theory as it was expounded by Crane, Ashbee and others around a decade earlier to Bone's work.

For the argument here, it is important to note the continuity between the nineteenth century Arts and Crafts apologists and the work of Eduardo Paolozzi in particular, who developed practices and ideas which relate closely to the Arts and Crafts Movement, indicated specifically by entitling a 1979 essay, "Junk and the New Arts and Crafts Movement" (see Part Two, Chapter 7), but also pervading fundamental aspects of his working approach.

Both Carlyle and Ruskin were responsible for maintaining that the machine and the arts were incompatible. This was largely, although, as we have seen with Morris, not exclusively maintained by the Arts and Crafts Movement. The aesthetic impulse behind monuments of Victorian engineering, such as the Forth Rail Bridge, were resisted by the Movement, evidenced, for instance, in Morris's rebuttal of the Bridge as "...the supremest specimen of all ugliness." [16] The problem is identified by Naylor: "This severe, truthful, austere and seemingly national style continued to be expressed in the engineering achievements of the nineteenth century, but the idea that the basis of a new aesthetic might be found there was never fully formulated, and...Britain failed to produce an adequate prophet of technique and functionalism." [17] Although, as will be seen in Part Two, Chapter 1, the engineer Benjamin Baker was one of the most vocal advocates of functionalism.

The Second Congress of the National Association for the Advancement of Art and its Application to Industry

One important thread concerning a realistic approach to industrial production and its relationship to the creative arts was developed through the staging of the second congress of the National Association for the Advancement of Art and its Application to Industry [N.A.A.A.A.I.], held in Edinburgh in from 28 October to 1 November 1889. [18] It is relevant to the above discussion on the Arts and Crafts Movement due to the fact that the congress was attended by William Morris and Walter Crane, among others, who held practical workshops as part of their contribution.

Morris and Crane were not by any means the only significant attendees. From the Arts and Crafts Movement there was also Lethaby, Mackmurdo, and the architect Voysey. Among the painters were Ford Madox Brown (whose major work Work (1852-65) features road-workers observed by, among others, Thomas Carlyle). Also in attendance were James Elder Christie, painter of an industrial subject, Anchor Mills across the Hammils (c.1870), C.E. Hallé (the French etcher with strong stylistic and subject affinities to Muirhead Bone), Whistler, William Strang and Charles Clausen. Whilst this cannot be considered a representative group, it serves to illustrate that a significant amount of serious artists with a proven interest in art and industrial subjects were together in Edinburgh at this brief time to exchange ideas on the subject under discussion here.

The evidence from the transcripts seems to establish the fact that the doctrines of functionalism were seen as central to any discussion of art and its relation to industry. This was evidenced in the following important passages delivered by architect, Robert Rowand Anderson, where, in passing, he attacks the views of Ruskin: "Art is not applied to any object in nature; the beauty we see there, and what seems by contrast the ugliness in the lower animals and plants, is inseparable from their structure and its functions which fit them for their environment and the purposes for which they have been created." [19] This articulation of a tenet of functionalism in the natural world was expanded by Anderson into the world of industry:

> "Who has looked down into the engine room of one of the great ocean steamers and not felt the impression of an irresistable power that rests not day or night. Look at a shearing or punching machine, that opens and closes its jaws, and cuts or punches iron plates, just as easily as cutting paper; the steam

> hammer, planing machines and pumping machines all have the same clear expression of their purpose...The designing of machinery, whether for peace or war, has now reached such a high standard of excellence in function, form and expression that one is justified in saying that these things are entitled to rank as works of art as much as a painting, a piece of sculpture, or a building, and also that machinery is the only true constructive art that has been produced since the decline of medieval architecture." [20]

This extraordinary passage anticipates much modernist architectural and design theory of the twentieth century and must have created some controversy, in its confident parallelling of the fine arts and engineering. Anderson's statements here represent the late nineteenth-century challenge of industry and all it had achieved over that century to the rest of society, in Anderson's case particularly the visual arts. The year in which Anderson's speech was delivered, 1889, marks the final stages of the construction of the Forth Rail Bridge, in close vicinity to the venue of the N.A.A.A.A.I. congress. Patrick Geddes, who gave a paper entitled "On National and Municipal Encouragement of Art Upon the Continent" bemoaned the lack of serious acclaim the Forth Bridge encouraged in Britain as a creative act: "...the conclusion of a great public undertaking, like the Forth Bridge, would in France be permanently commemorated by the striking of a medal or the erection of a monumental feature to the edifice, and also celebrated by an artistically directed popular *fête*." [21] It is almost certain that Anderson, as an Edinburgh resident, was aware of the publicity Benjamin Baker had given to the Bridge and its functionalist design. Anderson quite possibly had the functionalist theories of Benjamin Baker in mind, and it may indicate that Baker's theories were receiving a thorough and positive critical reception in Edinburgh. The conference was the venue for William Morris's famous dismissal, quoted in brief above, of the

aesthetic which lay behind the Forth Bridge when, paraphrased as a comment in reply to a paper by Edward S. Prior entitled "Texture as a Quality of Art and a Condition for Architecture", Morris stated that, "As for iron architecture, there never was and never could be such. Every improvement in the art of engineering make the use of iron more ugly, until at last they had that supreme specimen of all ugliness, the Forth Bridge." [22]

Anderson's reference to medieval architecture may reveal the influence of Pugin and his support for a Gothic style updated to the nineteenth century. [23] Anderson's confident challenge that engineering achievements, as a "true constructive art", ranked equal if not above the achievements in the arts was perhaps the background to the increase in Scottish artists such as Muirhead Bone (and the other etchers and printmakers), J.D. Fergusson, Stanley Cursiter and William McCance, who early in the twentieth century began to respond to this challenge.

The director of the Glasgow School of Art, Francis Newbery, also made a contribution to the N.A.A.A.A.I. Congress. In his talk he stated: "Picture painting is for the few; beauty in the common surroundings of our daily lives is, or should be, an absolute necessity to the many." [24] This might be seen as evidencing a suspicion of élitism in the fine arts, whilst opposing that with a broader, more populist and embracing view of aesthetics in society. Newbery did, however, have strong links with Edinburgh thinkers on this subject such as Geddes through his membership of the Social Union. Gerard Baldwin Brown, Professor of History of Art at the University of Edinburgh also attended and gave a Presential Address which certainly resisted too close a unity between art and industry: "Let

us leave machinery alone, and concentrate our efforts on the encouragement of handicraft, not in place of, but side by side with, machine production." [25] Unfortunately, we have no evidence to suggest that the vital topics under discussion here necessarily filtered down to the artistic community in Edinburgh and Scotland in general.

Concluding this chapter, we should note that all the active participants throughout the nineteenth century who contributed to the Arts and Crafts Movement sought a definition of art's responsibility towards society in general. This society had been most conspicuously and radically altered by the Industrial Revolution and therefore the most pressing problem was to align these thinkers and makers areas of interest, i.e. aesthetics and culture, to the wider dynamic of an industrialised society. The famous argument between Matthew Arnold and T.H. Huxley at the end of the nineteenth century concerning the benefits of a society progressed through the humanities or through science pivoted centrally in this same moral dichotomy. [26] Just as the dominance of the scientific tradition has not been dismantled over our own century it is not surprising that critics have seen Modernist concerns with art's place within an industrial society as rooted in the arguments of the Arts and Crafts Movement. A classic text by Reyner Banham, Theory and Design in the First Machine Age [27] made clear the link between late nineteenth-century thinking and that of the Modern Movement, citing, for example, an anonymous review in Architectural Review (1905), extolling "The impressive dignity, the beauty, the perfect fitness and the style of a modern express locomotive is incomparably finer than the best work of the best architect today. If only we could build with the same fitness, the same science, the same unchallenged acceptance

of modern material and modern conditions, and the same sincerity..." [28] Banham describes a strong tradition over this period including French and German architects such as Choisy, Garnier, Bruckmann, and Muthesius. Whilst the practices concentrated on here are mainly architecture-based, the ideological positions taken on a role for aesthetics within industrial society relate to all the arts, including the visual. Banham's discussion of this tradition's importance in relation to later theories of the Bauhaus, the Futurists and other Modernists is relevant to our theme and will be covered in later chapters.

NOTES

Part One, Chapter 1. Carlyle, Ruskin and the Arts and Crafts Movement

1. Gillian Naylor, The Arts and Crafts Movement: a study of its sources, ideals and influence on design theory, London: Studio Vista, 1971. p.7

2. Ibid., p.12

3. Reprinted in Thomas Carlyle. Selected Writings, Harmondsworth: Penguin, 1971.

4. Ibid., p.67

5. F.D. Klingender, Art and the Industrial Revolution (1947) reprinted, St. Albans: Paladin, 1972, p.37

6. Speech to the Architectural Association, 1857, quoted in Naylor, op. cit., p.24

7. "The Nature of Gothic" [1853], Stones of Venice, in Eric Warner and Graham Hough, Strangeness and Beauty. An Anthology of Aesthetic Criticism 1840-1910. Vol.1, Cambridge: Cambridge University Press, 1983, p.61

8. Klingender, op. cit., p.38

9. Cited in Naylor, op. cit., p.124

10. Naylor, ibid., p.145

11. "Signs of the Times", op. cit., p.64

12. Cited in Naylor, op. cit., p.110

13. Cited ibid., p.176

14. Cited in Lionel Lambourne Utopian Craftsmen. The Arts and Crafts Movement from the Cotswolds to Chicago, London: Astragal Books, 1980, p.143

15. Naylor, op. cit., p.177

16. Transactions of the National Association for the Advancement of Art and its Application to Industry, Edinburgh Meeting, London: T&A Constable, Edinburgh: Edinburgh University Press, 1890, p.332

17. Naylor, op. cit., p.148

18. For a discussion on the three congresses and the ideas of the N.A.A.A.A.I.'s founder, ref. Peter Stansky, "Art, Industry, and the Aspirations of William Martin Conway," Victorian Studies 19, no.4, (June, 1976).

19. Presidential Address, Section of Architecture, Transactions of the N.A.A.A.A.I., op.cit., p.142

20. Quoted in Naylor, op. cit., p.163

21. Ibid., p.306

22. Ibid., p.332. Note that Morris does not seem to distinguish between iron and steel, the latter rather than the former being the Bridge's material.

23. Cf. Evelyn Carey's use of mediaeval parallels, ie cathedral building, hinted at in the photography (see Part Two, Chapter 1) and in Muirhead Bone's etchings (see Part Two, Chapter 2). This aspect is also discussed in the Conclusion to Part One.

24. Cited in Lambourne, op. cit., p.92

25. Ibid., p.266

26. See Matthew Arnold, Discourses in America, London: Macmillan, 1885 and T.H. Huxley, Science and Education, London: Macmillan, 1893

27. Reyner Banham, Theory and Design in the First Machine Age, London: The Architectural Press, 1960

28. Ibid., p.46-7

PART ONE, Chapter 2

THE CONTRIBUTION OF PATRICK GEDDES

The theories of the Scots pioneer of sociology and town planning, Patrick Geddes (1854-1932), are extremely relevant to an examination of art and its relationship to industry in Scotland, both as perceptive analyses of his times as well as the challenge they represented to an increasingly specialised Western society. As discussed in the Introduction, it is clear that any questioning of specialisms relates to artists' treatment of industrial subjects, especially as such subjects are rare within the visual arts. As one commentator, Peter Green, has said of him: "...his objection to overt specialisation as an end in itself and his search for some means of integrating specialist knowledge within a handy scheme of reference aligns him with Bacon and Descartes." [1] It should be stated that there is little evidence to support a belief that artists themselves saw their work as explicitly supporting the generalist theories of Geddes *per se*, however close in intention they were.

In Geddes' thinking, as it evolved from around 1898 onwards, [2] he came to divide industrial progress into two distinct phases. The first Paleotechnic Age represented the cruder, less sanitised forms of early industrial institutions. As well as being harsher on the workforce they were also less efficient. The second Neotechnic Age, based on developments such as electricity and thoughtful town planning, was perceived as more life-enhancing and healthy, "combining of beauty with

utility in technological products," [3] and as such seems to anticipate the Modernist, utopian ideals behind the Bauhaus movement early in the twentieth century. However, Geddes envisaged a third Geotechnic Age which used technology to establish an harmonious balance between nature and the man-made world. This view was influentially put down in his 1915 Cities in Evolution and to some extent developed in his most emminent student's work, Lewis Mumford's Technics and Civilisation (1934). Clearly, Geddes' first two divisions have a great deal of relevance in that they describe and to some degree anticipate the transition between the 'industrial' and the 'post-industrial' world. He shares, with the Modernists, a positive view of technological progress, yet beyond one based not purely on increased technology itself, but rather a use of it which corresponds closely to current 'Ecological' concerns of the late twentieth century.

The key early influence in Geddes' intellectual development was one of the nineteenth century's leading positivist scientists, T.H. Huxley, whom Geddes studied under at the Royal School of Mines in London from 1874 for a year. (It was Huxley who was embroiled in the debate with Matthew Arnold over a science-based education versus an arts-based one. Their respective views are developed in Arnold's Discourses in America (1885) and Huxley's Science and Education (1893). Huxley's engagement with a comparison between the arts and sciences may well have initiated similar comparative reflections in Geddes' mind.) Whilst in London studying under Huxley, Geddes became interested in the urban change and development occuring at that time in London. There had been an on-going and extensive programme of urban renewal from the 1860s which had encouraged Whistler to record London, especially the Thames Embankment, before it was

irrevocably altered (see Part Two, Chapter 2). It must have been at this early stage in Geddes' career that the concept of the city as an organically developing entity first evolved, and was continued in later works, for example his influential Cities in Evolution. An Introduction to the Town Planning Movement and to the Study of Civics (1915). This concept had, of course, been a central part of some earlier Scottish art, notably John Runciman's etching Dismantling of the Netherbow Port (1764) and Alexander Nasmyth's Princes Street with the Royal Institution Building under Construction (1825). It was to continue as a theme in the etchings by Muirhead Bone of Glasgow, London and New York (see Part Two, Chapter 2).

The sense of moral outrage over the state of industrial society as well as a scientific desire to study the roots of the problem are two dominant concerns of Geddes, inherited from the scientific positivism of Huxley on the one hand and the social criticism of Carlyle on the other. Like Carlyle, Geddes published pamphlets with a strong moral and critical tone. He appealed to the Royal Society of Edinburgh in 1884 that "...the disadvantages of the division of labour, so slowly forced in to prominence through the sufferings of the many and the moral enthusiasm of an unscientific few, demand study and classification..." [4] Two years later, in "Is the Present System of Distribution Satisfactory?" he stated, "I don't imagine the average English capitalist of the present generation will be looked back to with any very great regret or enthusiasm; but - don't let us suppose the average workman will be either. This is not an heroic age..." [5] In comparing this passage with one from Carlyle's "Signs of the Times", we can see the strength of the link: "Were we required to

characterise this age of ours by any single epithet, we should be tempted to call it, not an Heroical, Devotional, Philosophic, or Moral Age, but, above all others, the Mechanical Age." [6] Similarly, in "The Making of the Future" (1917), Geddes wrote, "Since the Industrial Revolution, there has gone on an organised sacrifice of men to things, a large scale subordination of life to machinery." [7] which also echoes Signs of the Times strongly. Geddes' interest in Carlyle is further verified in that he later wrote two articles on Carlyle, entitled "Carlyle" as part of "The Homes and Haunts of Famous Authors No.8.", [8] and "Early Homes and Haunts of Carlyle." [9]

If the machine offered a metaphor for subordination, it, like the organic plant-life which Geddes studied, gave a metaphor for a mechanistic view of how society might work. As Boardman states: "By treating the processes of production and consumption as one vast mechanical process, by viewing society as a machine and interpreting all its phenomena as integration or disintegration of matter, with transformation or dissipation of energy, Geddes arrives at an all-inclusive physical systematisation." [10] A parallel illustration of Geddes' organic/mechanistic model for growth is related to an uncredited story of his teaching methods at University College, Dundee:

> "...even when both end of term and the visit of the external examiner were approaching, Geddes continued unperturbed with his mainly Socratic methods. One day instead of reviewing possible examination questions, he lectured on wheat stalks. First he showed photographs and sketches of the Firth of Forth railroad bridge in various stages of construction, and expounded the various engineering problems involved. Then at the end of the period, tradition says, he folded up his illustrations, remarking that 'there are many similarities between this bridge

and stalks of wheat. See if you can discover them for yourselves what they are." [11]

Whilst this report seems to have come down only from students present, it seems indicative of his teaching methods, using comparison rather than direct explanation, as well as the application of a 'machine aesthetic' in a form of biology. It is highly probable that the Forth Rail Bridge illustrations referred to were of Evelyn Carey's photographs of the Bridge under construction, (the drawings may be the engineering drawings of Westhofen, published in 1890 when the Bridge was finished.) [12] Geddes may have secured these photographs through contemporary publications such as Industries or The Engineer who reproduced Carey's work. It is unlikely that these photographs are by others, as no single photographers took a substantial amount of work-in-progress images other than Carey. Geddes seems to have had an abiding fascination for the Bridge, in that he and his family lived for a time in a house on the Firth of Forth which overlooked the Bridge. [13]

When Geddes came to consider the role of visual art in society, as he did in a pamphlet, Every Man His Own Art Critic (1887), which accompanied an exhibition hosted in Manchester (1887) and Glasgow (1888), the comparison with the sciences was to the forefront: "The painter also feels himself a man among men, to whom nothing human is foreign, nothing henceforth common or unclean. The painter will not be behind his scientific brother in his resolute enquiry into all things visible." [14] This seems a concise Realist manifesto, where the artist is encouraged to look at all aspects of human activity however unsavoury. It seems to echo

closely a well-known passage by John Constable in the relation between the artist, the scientist and the visible world:

> "Painting is a science, and should be pursued as an enquiry into the laws of nature. Why, then, may not landscape be considered as a branch of natural philosophy, of which pictures are just experiments?...In such an age as this, painting should be understood, not looked on with blind wonder, nor considered only as a poetic aspiration, but as a pursuit, legitimate, scientific, and mechanical." [15]

It remains difficult to gauge with any degree of precision the direct influence of Geddes' pamphlet among painters. The exhibition's Glasgow showing (1888) would have occured within the context of the ascendency of the Glasgow Boys, who may have felt some sympathy with Geddes' challenge to a hierarchy of subjects worthy of fine art. However, the passage does more fittingly anticipate the gritty depiction of industrial subjects by Muirhead Bone, who, ten years later, similarly challenged the view that images of working life and less elevating subjects were not the province of artists (see Part Two, Chapter 2).

Geddes' view, however, was not one which supported a documentational role for art: "Art is no longer for fact's sake; she is indignant with the very thought of being a sort of handmaiden to science. Henceforth she is free. At length we have art for art's sake." [16] The modern world, per se, was not a repository for beauty, according to Geddes, who commented on "...the crudeness and ugliness of our modern industry." [17] yet in an interesting passage, seeks out an aesthetic, perhaps a rather picturesque one, from the trams and advertisments within the city environment:

> "Look at the tramway cars outside. Any one can more or less see their ugliness, but a far more searching test of artistic

> progress is the measure in which we can see positive beauty. Nothing in the range of experience promises less than these big red and yellow boxes with their advertisements. Yet set them running up and down the rails, and watch how the strong foreground colour and mass of the nearest one instantly brings out the perspective of the street through all its misty distance...They are playing for us the game of colour, these ugly cars...In the same way the hoarding with its bills needs only distance to refine it; indeed, as Ruskin tells us somewhere, these are now well-nigh our only source of street effect; no doubt, fitly so, since the exchange of public decorator for bill sticker, dignified, of course, as advertising contractor, is only the most obvious artistic feature of our "progress in the arts."" [18]

Geddes' is neither propounding a machine aesthetic, nor an appreciation of advertising as a popular art, but is trying to bring his beliefs on art to bear on ostensibly hostile subjects, such as the industrialised and urban environment.' This passage can be informatively compared to Cursiter's Futurist series, painted over twenty years later, such as The Sensation of Crossing the Street - The West End Edinburgh (1913) **[Fig. 103]** which depicts tramcars and the general bustle of the city (see Appendix II). Cursiter's pictorial emphasis on colour and visual sensation was, we can expect, exactly the type of response by the artist to the city that Geddes would have approved. [19]

The "crudeness and ugliness" of the products of industrialisation, criticised by Geddes, was not due to ugliness resident in a machine aesthetic as such but in the attempt to disguise the function of these products with superfluous decoration: "What Mr. Whistler would rightly call the woful [sic] ugliness of the industrial products exhibited outside this art-gallery is due to the very labour wasted upon would-be beautifying of them by hands which have lost their old savage cunning, without becoming

truly civilised." [20] This shows Geddes' awareness of the debate being fought around industrial design, which continued into the twentieth century with movements such as the Bauhaus, and also shows a direct parallel to the views propounded by Benjamin Baker in his defence of the Forth Rail Bridge, contemporary with Geddes' publication. (Baker's Functionalist ideas in relation to industrial design and engineering are examined in Part Two, Chapter 1.)

There exists a variety of other activities through which Geddes sought to establish a dialogue between art and industry. From 1887 to 1899, Geddes initiated an influential series of month-long summer schools held in the University Hall, Edinburgh. These are now credited as the first true summer schools, and consisted of contributions from internationally known intellectuals concerned with a synthesis between and examination of the variety of activities known as the arts and sciences. As Boardman states: "His project can be called the first real summer school in Europe to combine art, philosophy of education, and science." [21]

Before the summer schools came to an end Geddes had edited, contributed to and published another project, The Evergreen: A Northern Seasonal, which produced four issues from 1895-6. [22] His aims for this publication have been described as "...thawing out the 'frozen ice-pack of culture' that was Edinburgh and bringing some feeling for art to 'that inferno of industry', Glasgow." [23] Those who construct the cities in which many inhabitants live were a vital focus for Geddes who, in The Evergreen, asks that they

"...begin to discern and prepare for their immediate task - to cleanse and change the face of cities, to re-organise the human hive...they will grapple with the central and the supreme Art possible to mortals, the very Mystery of Masonry itself, which has its beginnings in the anxieties of calculation and the perplexities of plan, in the chaotic heaps of quarry, in the deep and toilsome labour, the uncouth massiveness of the foundations.." [24]

This stirring, Piranesian view of architecture brings to mind the graphic work of Muirhead Bone which records exactly these sensations. Whilst The Evergreen appeared at the very beginning of Bone's career, making a direct link unlikely, very close parallels exist between the respective urban outlooks of Geddes and Bone. (Connections are discussed in Part Two, Chapter 2.) In regard to modern or industrial subjects in the visual arts, The Evergreen is disappointing, with contributors such as Paul Serusier, Robert Burns and John Duncan concentrating on mythic, pastoral and symbolic themes of little relevance to the concerns of art and industry often evident in Geddes' writings, although John Duncan's friezes in the Edinburgh Room of Ramsay Gardens did depict notable scientific and industrial figures such as James Watt and Joseph Lister (treated as latter-day heroes in the tradition of more mythic personae). In general, though, it can be observed that Geddes' contribution as an actual critic of the visual arts was not always as modern and challenging as his generalist ideas of the visual arts' relation to industry and society in general.

City Development. The Dunfermline Report

In Geddes' major report to the Carnegie Trust of Dunfermline in 1904 where he laid out in detail proposals for a total redesigning of that town, he

devoted Chapter 15 to "The Art Institute". Here he continued some of the themes, especially direct observation, the relationship between art and science, and a generalist view of culture, which had appeared in Every Man His Own Art Critic almost twenty years earlier. The importance of the artist was made explicit:

> "...for though in exceptional art schools, like that of Glasgow, the artist has come into power, we still elsewhere commonly find points of view and educational proposals which are far behind the arts progress of the times. This progress is no doubt less generally appreciated than is that of industry or science, perhaps because it has been outrunning even these." [25]

Clearly Geddes was highly positive about the best of the visual arts at the time of writing his Dunfermline report. He continues: "As regards general appreciation, we have plainly first of all to communicate the Art of Seeing, even before the Seeing of Art." [26] As Boardman says: "Geddes was more concerned with...the raising of public taste in art than with building up a large collection of pictures. He pleaded for revolt against the dead hand of traditional instruction...His revolt was to be made durable by teaching observation and 'healthy and joyous seeing' out of doors." [27] Geddes' attitude to the visual arts, shows a strong bias toward understanding through the medium of art and direct contact with the visible world and as such facilitates connections between the reality of Scotland and its representation in art.

> "We naturalist observers, reporting the facts of nature or life as we find them - whether for the scientific journals or the daily press matters little - are like the realist painters of thirty years ago; while, in so far as we seek to arrange our knowledge, we begin to reach the level of the designers. Beyond this again, as we begin to discover the trend of evolution, we necessarily become in so far idealists, optimistic or pessimistic; and then we discern more fully the complex inter-

relation and unity of things, and their significance in terms of personal or social life, we become so far symbolists." [28]

To illustrate the high idealism with which Geddes underpinned large-scale town projects such as this one for Dunfermline, he invoked the name of Leonardo da Vinci, the archetypal universal man:

"This man, by general consent the most representative genius of the Renaissance, reconciling the culture of art and science, of poet and engineer, of archaeologist and inventor, into eminent productive achievement, in all these fields and more, is the very type of high productivity based on true education; that education at once of appreciative senses and of active and disciplined hand, that culture of intellect yet of feeling, of imagination yet of executive power..." [29]

In a final passage, Geddes articulates the role of art in relation to the wider matrix of human activity, especially industry and science:

"In this wondrous technical age, which is again transforming the world and history, do we not recall with pride that we here in this island, indeed in this particular central region of it, have been the initiators par excellence? But if so, is it not of the older and lower development that we have been historically the masters - those of coal and steam rather then those of electricity and art? Must we not, therefore, call this earlier and crude mechanical civilisation which still predominates among us the "Palaeotechnic" stage, and recognise that the formerly less prominent industrial peoples, who now increasingly dispute our mastery in markets, because in taste no less than in science they are excelling us, are passing more quickly than we into the "Neotechnic" stage - that of industrial civilisation proper? And if this be so, as so it surely is, may not the raising of our art-level be as truly important an aspect of our whole development, even our racial and national continuance, as are forms, or institutions, or politics at present more prominent?" [30]

Geddes' reference to the central region of "this island" certainly refers at least in part to Scotland and its contribution to the Industrial

Revolution. However, Geddes seems to be appealing for an awareness that that age will be replaced by a subsequent age dominated by "electricity and art", characterised by cleaner, modern technologies and cultural pursuits. He also cites the increased economic competition from previously lesser developed countries (he may have been thinking of the United States, for example). In this he is anticipating the main concerns of a 'post-industrial' environment and one which he encourages Britain to adapt to, as early as 1904. In this new situation he states explicitly the importance of art as a fundamental component in what he termed the "Neotechnic" stage of industrial development.

The Cities and Town Planning Exhibition

The Cities and Town Planning Exhibition of 1910-11 which Geddes organised firstly for the Royal Academy and subsequently for the Royal Scottish Academy, Edinburgh and the Royal Dublin Society, gives insights into Geddes' method and ideas on industrialisation and urbanisation. [31] The exhibition included cuttings, illustrations, photographs and maps explaining important aspects of a variety of cities, both past and present. Its layout was vivdly described by Patrick Abercrombie: "The visitor could criticise his show;- the merest hotch-potch, picture postcards, newspaper cuttings, crude old wood-cuts, strange diagrams, archaeological reconstructions - these things, they said, were unworthy of the Royal Academy." [32] However, Geddes' approach here seems representative of a form of visual thinking; one which demonstrated ideas through illustration rather than literal explanation, and as a method extends most noticeably to the approach of Eduardo Paolozzi later in the century (see Part Two,

Chapter 7). Edinburgh was presented in Room 8: "Outline of a Survey of Edinburgh" and had a visual art component, cited in the catalogue as "Three large Paintings in Oil of Edinburgh, by Eric Robertson, showing complex modern development to be surveyed, ie., analysed and interpreted geographically, historically, socially, etc." [33] Although Robertson is today known as a painter of semi-fantastic, erotic and mythical scenes, Geddes obviously saw fit to include, or perhaps commission, these untypical subjects from Robertson. (A few years later, Robertson did do one other modern subject based on the First World War, entitled Shellburst (1919). This work is strongly influenced by Vorticist abstract devices, depicting, as the title implies, a shell exploding during action.)

Entries under the title, "Age of Civil Engineering", show that industrial objects outside the city were included, for example, "No.62. Types of Improvement before Railway Period - bridges, viaducts, embankments. Note generally dignified character. No.63. Photos of these. No.64. Culmination in Forth Bridge: this is a natural, i.e., logical as well as regional, development." [34] It is quite possible that Carey's, Wilson's or Valentine's photographs were used as illustrations to the exhibit on the Forth Bridge, and certainly corroberates the high esteem in which Geddes held the Forth Bridge. [35]

Underlying this exhibition was the theme of industrialisation and society's living relationship to it. Early in the catalogue, Geddes had commented: "The illustrations of the Revolution (Political in France and Industrial in Britain) have also to be noted; and the question has to be asked - How far do these imperial plans whether in old Versailles or new

Chicago really meet the needs, either of industrial life on the one hand or of the industrial worker on the other?" [36] Industry, art and new technologies are all brought to bear on the problem of "Evils of the City", a section near the end of the exhibition: "...an attempt to discover the sources of disordered function from which these social diseases, like individual diseases, must surely arise." [37] "Our problem of grappling with the City's Evils is thus fermenting towards clearness. We need a criticism of their present too solitary modes of action. For industry without art produces the ugly; art without industry the useless." [38] "The dirt, the smoke, the waste, the squalor, with their resultant drink, and the disease, in short, the characteristic evils of the age of coal and steam, thus happily now may be abated, largely even towards disappearance, with this Coming of Age of Electricity." [39] Geddes' here is remarkably prophetic in seeing an avenue of escape from the oppressiveness of the image of nineteenth-century industry (so derided by Carlyle and Ruskin) through the employment of electricity: a clean form of technology, set up as a utopian measure to combat the gloom of "the age of coal and steam." [40]

Geddes had inherited the taxonomy of a world view which set apart the arts, industry and the sciences as separate activities, yet he felt the need for a new synthesis between these disparate areas of social activity. In 1887 he produced Industrial Exhibitions and Modern Progress: "...a study of industrial exhibitions as manifestations of the contemporary state of civilisation" [41] In a letter of October 1914 he shows the dialectical foundation underlying his way of thinking: "But while agriculture and engineering on the one side, and religion and culture on the other, all

alike will go on failing of true accomplishment in life. The re-synthesis, the revivifying of the largely outworn faiths around us is no easy matter as things now stand..." [42] Much later in his life he published, with J. Arthur Thomson, a book Life: Outlines of General Biology (1931) where the later chapters consider the modern classification of the arts and the sciences. Clearly Geddes' passionate concern to reconcile these areas "whaur extremes meet" (to borrow Hugh MacDiarmid's phrase), was regenerated and re-examined directly by later critics discussed in the following chapters.

NOTES
Part One, Chapter 2. The Contribution of Patrick Geddes

1. Peter Green, introduction to Geddes' City Development. A Report to the Carnegie Dunfermline Trust, (Edinburgh: Geddes and Co., Outlook Tower, 1904). Reprinted New Brunswick: Rutgers University Press 1973, p.5

2. Philip Boardman, The Worlds of Patrick Geddes. Biologist, Town Planner, Re-educator, Peace-warrior, London: Routledge and Kegan Paul, 1978, p.307-8

3. Ibid., p.307-8

4. "An Analysis of the Principles of Economics" Proceedings, R.S.E. XI, cited ibid., p.65

5. Cited ibid., p.93

6. "Signs of the Times", op. cit., p.64

7. Cited in Boardman, op. cit., p.303

8. The Weekly Leader, 28 August, 1902

9. Oxford and Cambridge Review, No.8, Michelmas Term, 1909

10. Boardman, op. cit., p.64

11. Ibid., p.109

12. It should be noted that Mrs. Sophie Leonard, Archivist at the Patrick Geddes Centre, recalls Forth Rail Bridge construction photos deposited in the Geddes Collection, but these have not been located to date.

13. Philip Mairet, Pioneer of Sociology. The Life and Letters of Patrick Geddes, London: Lund Humphries, 1957, p.xix

14. Every Man His Own Art Critic, Manchester: Heywood 1887, and Edinburgh: Brown 1888 cited in Boardman, op. cit., p.98. The 'Art/Science' comparison may well reflect Huxley's interest in the subject, whose Science and Education (1893) was published six years later.

15. Lecture IV, "The Decline and Revival of Landscape", Lectures in Landscape (1833) in John Constable's Discourses (compiled and annotated by R.B. Beckett), Ipswich: Suffolk Records Society, 1970, p.69

16. Every Man His Own Art Critic, op. cit., p.14

17. Ibid., p.24

18. Ibid., p.25

19. Furthermore, much later in life, Cursiter indicates a direct link, in speaking positively of Geddes in a letter to William Hardie, saying: "He

[Geddes] was a remarkable man, and by his unlimited enthusiasm he could persuade people to do things, or attempt to do things, far beyond their capacity." [Cursiter - Hardie correspondence, 18 November, 1973, National Library of Scotland.]

20. Geddes, op. cit., p.40-1

21. Boardman, op. cit., p.129

22. Vol. I Spring 1895; Vol. II Autumn 1895; Vol. III Summer 1896; Vol. IV Winter 1896-7. Edinburgh: Patrick Geddes & Colleagues

23. Cited in Boardman, op. cit., p.150

24. "Life and its Science" in The Evergreen (Spring 1895), op. cit., p.37

25. City Development, op. cit., p.168

26. Ibid., p.169

27. Boardman, op. cit., p.205

28. City Development, op. cit., p.174

29. Ibid., p.169

30. Ibid., p.174-5

31. Patrick Geddes and F.C. Mears, Cities and Town Planning Exhibition. Guide-Book and Outline Catalogue, Dublin: Brown and Nolan, Ltd. 1911.

32. Cited in Mairet, op. cit., p.141

33. Cities and Town Planning Exhibition, op. cit., p.35

34. Ibid., p.36

35. Another entry of interest is under "Monuments and Restorations". Entry No.96 reads "Early photos by D.O. Hill, lent by F.C. Inglis." It is possible that, under the title of "Monuments and Restorations", Geddes included Hill's photographs of the construction of the Scott's monument which comprised images of masons at work on the stone.

36. Cities and Town Planning Exhibition, op. cit., p.17

37. Ibid., p.49

38. Ibid., p.49

39. Ibid., p.55

40. In 1901 Muirhead Bone echoed Geddes' optimism in a short passage extolling the virtues of what he called his "Electric Light Effect":

electric lighting transforming the outward appearance of the city (see Part Two, Chapter 2).

41. Cited in Mairet, op. cit., p.75

42. Cited ibid., p.155

PART ONE. Chapter 3

THE SHIPBUILDING AESTHETIC

Major Scottish artists who have depicted the shipyards firsthand, such as Muirhead Bone and J.D. Fergusson, are examined in Part Two. The related aspect discussed in this section, and in part continuing from the ideas of Patrick Geddes, is concerned with the development of the abstract argument among Scots artists and writers that, through ship construction, the Scots have channelled aesthetic ability into their industrial products. Prior to the decline of shipbuilding in Scotland, we find few serious commentaries on this kind of subject, a position which may be due to the fact that success does not readily create the conditions for self-reflection. It was only when shipbuilding could be generally seen as losing its hold on the Scottish economy that its decline, along with all the creative and material energy expended in that field, became a source of concern on a wider, cultural level. We see writers such as Ian Finlay, Hugh MacDiarmid and artists such as J.D. Fergusson, taking time to analyse the relationship between Scottish shipbuilding and Scottish aesthetics.

Fergusson's publication Modern Scottish Painting (1943) includes a chapter on "Art and Engineering" where the author discusses various ideas on the inter-relation between the two disciplines. The nature of this discussion is, like the approach taken throughout the book, somewhat random and highly subjective. This chapter takes the form of loosely formulated conjectures on this theme. He follows a direction developed by

others when he says

> "...about art and engineering? Is it not that the creative power of the Scot has been diverted from literature, painting and the recognised art mediums, to the wonderful engineering feats like the forth [sic] Bridge or the Queen Elizabeth? That's not so easy. Is the Forth Bridge, which I've *always* admired, a work of art? Is the Queen Elizabeth a work of art? If not, why not?" [1]

Fergusson then changes the focus of attention on to contemporary art, where he identifies a whole school of young painters (and possibly sculptors) who

> "...are producing works resembling pieces of machinery, just as at other times artists were producing works that resembled human beings.
>
> I admire these young people. These machinery like works are not *imitations* of machinery...Only the uncreative (not artists) are imitative.
>
> These young people are impressed by the dignity, the wonder of machinery and engineering achievement." [2]

It is unclear exactly who in Scotland Fergusson might be refering to, if indeed he means Scottish art as opposed to art from elsewhere. Nevertheless, he shows himself supportive of the engagement of a type of machine aesthetic, in some ways not dissimilar to his works of the First World War at Portsmouth Docks (see Part Two, Chapter 3).

The theme of this chapter in Modern Scottish Painting was soon resurrected in a slightly later article, "Art and Atavism: The Dryad", written in 1944 for Scottish Art and Letters. It began with an analogy from industry, with the artist describing being "intrigued by the mechanical design...this sustained and unapologetic persistance of shapes,"

of a Renault car, and later in the same article, as being a "person aware of progress and open to modern impressions, and modern thought." [3]

In a colourful polemic by Ian Finlay, Art in Scotland, there is an attempt, in surveying Scottish art, to find a place for the great feats of Scottish engineering. Ian Finlay was an associate of MacDiarmid's around the time of the Second World War and a flow of ideas from one to the other can be infered at this time. For example, in MacDiarmid's 1950 manuscript Aesthetics in Scotland (published in 1984) he acknowledges having read Finlay's book. [4] Aesthetics in Scotland, written only two years after Finlay's book, can be considered almost a response to the topics raised by the earlier author (see Part One, Chapter 4).

In talking about a Scottish vernacular style in the visual arts Finlay comments that, "It exhibits an instinct for functional form which may be reflected also in a small way in the sixteenth- and seventeenth-century Communion cups, and in a large way perhaps in the engineeering deeds of the Clyde." [5] He goes on to interpret this as an aspect of a Northern "abstract, ornamental...style," as opposed to Southern "representational, realist, descriptive art." [6] Identifying an archaic, personal and symbolic aesthetic which he sees evident in Scottish art he contrasts this with Western culture's "devotion to purely mechanical exploitation of our resources, to the methods of the laboratory, to the urban ideal..." [7] It is not the purpose here to challenge or defend the particular generalisations asigned to the Scottish psyche by Finlay, other than to point out that the "purely mechanical exploitation of our resources" has been an aspect not only of Western industrialised countries in general but Scotland in

particular, since the Industrial Revolution. This fact would align itself equally well with Scotland's supposed "instinct for functional form" found both in art and engineering. Certainly, the Scottish artists discussed here who have dealt with industrial subjects have on the whole resisted Finlay's Northern "abstract, ornamental...style" in favour of a more direct, empirical interpretation of industry. [8] Clearly, there are many varying approaches in interpreting art's relationship to industry, often, as in Finlay's case, relying necessarily on generalisations and instinct.

In trying to pinpoint the chief characteristic of work in the shipyards Finlay continues thus: "In the shipyards a sense of common craft maintained a curious personal bond between master and men in spite of the gulf in material benefit, a bond quite unthinkable under the systems of true mass-production or pre-fabrication. Integrity is perhaps the term for this quality, common to all industries..." [9] Finlay, reluctant to draw distinctions between artists and non-artists in preference for defining a distinctly Celtic aesthetic, says that

> "...I am convinced the Scot found in the creation of machines an outlet even for a higher aesthetic urge. Any artist will admit the powerful fascination which he finds in a modern aero-engine or a jet-propulsion turbine with its network of delicate nickel parts expressing precision contrasted with the massive turbine itself, eloquent of power. If such creations are not the work of artistic intuition, but of the complementary method of scientific research, the artist cannot but approve what the scientist has created. The artist, in the words of J.D. Fergusson, "sees in advance the functional form necessary for the best results in a Queen Elizabeth." [M.S.P. p.58] Conversely, the instinct by which a good engineer approves an engine by the look of it or by the harmonious sound of it as makes no difference. Much of the soundest Scottish creative impulse of the period, then, is to be looked for in the machines which went out from the Clyde basin to all corners of the world, and it is surely no accident that the men who built the machines and later tended them across the seas were predominantly Celts." [10]

The reference to Fergusson's Modern Scottish Painting, published five years before Finlay's book, in 1943, points to a continuity of thought on this subject and directly shared ideas.

Finlay, as a prominent writer in Glasgow, would have had direct contact with Fergusson, who had returned to Glasgow in 1939. The most direct vehicle for a cross-fertilisation of ideas between Fergusson, MacDiarmid and Finlay in the latter half of the 1940s, however, comes with Scottish Art and Letters published between 1944 and 1950 where Fergusson held the post of art editor for the entire series and MacDiarmid was editor for the final issue in 1950 but was involved and reviewed in the magazine prior to that time. This coincides with the strong presence of Scottish aesthetics and engineering as an issue starting with Fergusson's 1943 publication to the 1950 draft of MacDiarmid's Aesthetics in Scotland text.

It is clear that Finlay perceives a critical distinction between work by a Clyde shipyard worker and work done on a mass production line. Both are consequences of the Industrial Revolution yet only the former has any claim on being called 'aesthetic':

> "The heavy industries of the Clyde Basin have been a fundamental part of the Scottish economic system for more than a century and a half and they must take their place in any estimate of Scottish industrial art. They can show a record of sound, sober craftsmanship and excellent functional design throughout a period when more versatile industries in other parts of Britain were mass-producing articles which revealed understanding neither of the materials nor of the uses to which they would be put." [11]

Scots craft, which Finlay sees as a binding factor in the shipbuilding industry, is seen by him also as having the attribute of economy: "Always, Scottish craftsmen had shown a distrust of 'whigmaleeries', of meaningless ornament. They had entered with enthusiasm into the spirit of the machine age, even if that had meant contributing to its initial ugliness." [12] If the Victorian age produced much adornment both on its architecture and its industrial products this is largely less evident in Scottish architecture, craft and industry of the period. The emphasis is rather on simplicity and function. In this he is endorsing the terms of reference laid down by the Arts and Crafts Movement, by Benjamin Baker in his defence of the Forth Rail Bridge (see Part Two, Chapter 1), and the promotion of functionalism by R. Rowand Anderson at the N.A.A.A.A.I. conference (see Part One, Chapter 1).

Finlay's question revolves around the problem of locating creativity. Without directly addressing the creativity involved specifically in shipbuilding <u>design</u>, Finlay instead emphasises the worker-craftsman as artist - "The Scot is essentially a craftsman-individualist with a 'feel' for his material and tools..." [13] Of the shipyard craftsmen themselves:

> "The unnatural divorce of art from industry has deprived them of a considerable sum of credit to be weighed against a long delay in achievement in the fine arts. Direct questions to a Clyde shipyard worker may hardly elicit support for the view that aesthetics enters into this process of creation, but that is not important - the most skilled medieval craftsman would have been embarrassed at the question...A ship, like a medieval church, is the creation of many minds and of a still larger number of hands, and if it achieves beauty this is not to be denied simply because it was not produced in the studio of a single man of genius." [14]

Finlay here is locating what he sees as fundamental characteristics of the production of art, articulating the belief that manual skills, corporate, as opposed to individual, contributions are its basis. In doing this he looks back to the medieval past, especially its ideals as promoted by William Morris, whose work attests to the importance of co-operative labour, by both designers and craftworkers, towards large-scale creativity. [15] This, more than just emphasising the corporate nature of church building, focusses attention on a time when the distinction between 'fine art', 'craft' and 'industry' was not generally accepted and therefore did not operate in the minds of those designing or building the churches. In the graphic work of Muirhead Bone of shipbuilding on the Clyde, for example, Shipbuilders, Whiteinch (1899. See Part Two, Chapter 2), in drawing a visual parallel between shipbuilding work and medieval church construction, the artist is touching on the same kind of concerns which Finlay makes explicit regarding the relatively recent "unnatural divorce" between the disciplines of art and industry - "Industry and art are two aspects of a single activity - the general creativity of a people. The uneasy state into which art has got in Western Europe is due fundamentally to the violation of this unity." [16]

A vital precedent may also be found in the example of Fernand Léger, clearly an inspiration for Fergusson's style of painting, but also in his writing on the machine and medieval architecture he impinges on themes which are shared between Fergusson, Finlay and even Muirhead Bone. For example, in his 1924 essay, "The Aesthetics of the Machine", Léger talks of

> "...the architecture of the mechanical...The Gothic realised an equilibrium that was often perfect between the play of curves and of straight lines...There are Gothic facades that vibrate

like a dynamic painting...One can assert this: a machine or a manufactured object may be beautiful when the relation of the lines which define its volume are balanced in an order corresponding to those of preceding architectures. We are not, then, in the presence of an intrinsically new phenomenon, but simply of an architectural manifestation like those of the past." [17]

In this article, Léger raises this search for a medieval root to a machine aesthetic as well as other issues concerning utility, function and beauty in art and industry that undoubtedly lay at the foundation of Finlay's and Fergusson's treatment of the subject.

Reflecting an awareness and sympathy for the Arts and Crafts Movement, Finlay argues for radical solutions within industrial design: "In France, in Germany, in England the unnatural division produced, on the one hand, industry enslaved to ugliness, and on the other an art which came to have less and less meaning for society..." [18] In pointing to England, rather than to Great Britain as a whole, as one of the producers of ugliness in industry and meaningless in art, he then is required to make the case that Scotland has to some extent resisted this polarisation. He continues: "Scotland too has come under the influence of this dangerous dualism in creative activity, but her long-established suspicion of aesthetics as something exotic might now almost be looked on as a sign of grace, not as a mark of cultural immaturity." [19] This, though a very general statement of conviction, clearly makes the point that Finlay believes that traditional romantic notions concerning artistic genius and creation have become somewhat unusable, relying as they do on a disproportionate emphasis on subjectivity and separateness on the part of the artist. If, as Finlay maintains, the Scots have an indiginous antipathy

for this set of circumstances, then the question is begged as to what particularly Scottish aesthetic can be built around her industry, either by artists using it as a source of inspiration, or by some means of creativity as expressed through the work done in designing and constructing ships. There came at the time of publication, some support from at least one significant reviewer of the book in Scottish Art and Letters in regard to the position functionalism seemed to have in Scottish aesthetics. Ian H. Finlay (Ian Hamilton Finlay) writes that Finlay, "...very sensibly asserts that functionalism is characteristic of our visual arts. (One would like to see this theme developed by some responsible critic; say Melville, or Wyndham Lewis who has some interesting things to say about Calvinism and Colquhoun.)" [20] Thus, issues concerning art, engineering and functionalism clearly were being addressed around this period in the artistic community in Scotland.

Any close reading of these important contributions by both Fergusson and Finlay does reveal that they do not always make their terms clear, that is, whether they are concerned with the input of the engineer himself, or the manual worker-craftsman who physically assembles the ship. There is no clarification as to whether they thought they were discussing two different types of creativity in operation, or just two different levels of creative production. If the latter is true, near impossible questions are raised with respect to nation and national characteristics concerning the Scots' relative ability as engineers and craftworkers. (For example, how do we extricate the English contribution to the design of the Forth Rail Bridge from the Scottish contribution to its manufacture and construction?) Whilst the specific areas of interest they bring into focus are extremely

challenging and whilst they make in their writings important insights into the relationship between aesthetics and engineering, we must be cautious of the wide generalisations made, especially in dealing with exclusive racial attributes. The co-operative effort associated with large industrial enterprises so lauded by Fergusson and Finlay in itself produced a highly differentiated personnel, whether it be in the form of non-Scottish designers contributed in the Drawing Office of a shipbuilding firm, or Irish labour crafting a ship in dry dock. Thus, issues of race and nationhood within any modern industrialised society confound many generalised theories.

Fergusson and Finlay were not the only two writers on Scottish art to consider its relationship to shipbuilding. The contribution of Hugh MacDiarmid is discussed in Part One, Chapter 4. In a similar context, Stanley Cursiter in The Arts in Scotland (1942), published a year before Fergusson's Modern Scottish Painting, points out that "...it is clear that Scotland has a long tradition in fine craftmanship - a craftmanship which is reflected to-day in the workshops and the shipyards of Clydeside." [21] The use of the term "reflected" shows perhaps some reluctance on Cursiter's part to identify more accurately how 'artistic' craftmanship might interconnect with 'industrial' craftsmanship.

The above analysis of a number of writers who have sought to clarify the relationship between industrialisation and the visual arts, reveals a close correlation of interests around the Second World War which centred around Glasgow. As can be seen, many significant contributions were made to this difficult subject in published form. This relatively high profile

which the art and industry debate received at the time built a theoretical context within which the art of those working contemporaneously can be interpreted. These Glaswegian artists are discussed in Part Two, Chapter 6.

NOTES
Part One, Chapter 3. The Shipbuilding Aesthetic

1. Modern Scottish Painting, Glasgow: MacLellan, 1943, p.56

2. Ibid., p.56-7

3. Scottish Art and Letters, Vol.1, No.1, 1944, Glasgow: MacLellan, p.47

4. Aesthetics in Scotland, (1950), Edinburgh: Mainstream Publishing, (Alan Bold, ed. and intro.) 1984, p.210

5. Art in Scotland, Oxford: Oxford University Press, 1948, p.4

6. Ibid., p.5

7. Ibid., p.7

8. Interestingly, Wyndham Lewis entered into this abstract discussion of the indigenous importance of industry within the British psyche, when he published in Section VI of Blast No.1, that "The Modern World is due almost entirely to Anglo-Saxon genius - its appearance and spirit. Machinery, trains, steamships, all that distinguishes externally our time, came far more from here than anywhere else." [In Walter Michael and C.J. Fox, Wyndham Lewis on Art. Collected Writings 1913-1956, London: Thames and Hudson, 1969, p.30] It is unfortunate, though, that he remained insensitive to possible distinctions between English and Scottish experiences of industrialisation, conflating the latter into an unacknowledged subset of the former. Lewis's references to the Anglo-Saxon race and Englishmen, made in order to claim industrialisation for his own as against Italian Futurism, does ignore Scotland's contribution to this debate as a heavily industrialised nation.

9. Art in Scotland, p.115-116

10. Ibid., p.121-122

11. Art in Scotland, op. cit., p.164

12. Ibid., p.123

13. Ibid., p.165

14. Ibid., p.164

15. For example, ref. William Morris and the Middle Ages, (Joanna Banham and Jennifer Harris, eds.), Manchester: Manchester University Press, 1984. Also see Conclusion, Part One in this thesis.

16. Art in Scotland, op. cit., p.168

17. Fernand Léger, "The Aesthetics of the Machine", Bulletin de l'Effort Moderne (Paris) I, 1&2, (January and February, 1924). Cited in Theories of

Modern Art. A Source Book for Artists and Critics, (Herschel B. Chipp, ed.), Berkeley: University of California Press, 1968, p.278 .

18. Art in Scotland, op. cit., p.168

19. Ibid., p.168

20. Scottish Art and Letters, (1949), No.4, p.55. Other than that comment, Ian Hamilton Finlay is predominantly unsympathetic to Finlay's general thesis.

21. The Arts in Scotland, Edinburgh: Oliver and Boyd, 1942, p.5. See also Cursiter's Art in Industry (with special reference to conditions in Scotland), (Saltire Series No.4, Edinburgh: Oliver and Boyd, 1943) for a general survey of industrial design in Scotland. Cursiter's approach is relatively traditional as evidenced in the following passage: "The application of art to industry has a two-fold purpose - to increase sales and to improve the article as judged by aesthetic standards, with, as a reaction, the general elevation of popular taste." (p.8)

PART ONE, Chapter 4

HUGH MACDIARMID AND THE VISUAL ARTS

In important respects, the poet and writer Hugh MacDiarmid continues the tradition of re-appraising art and industry first set out by Patrick Geddes. The themes of generalism, anti-specialism, the art and science debate and the search for a responsible role for art within industrialised society analysed by Geddes are placed within an entirely Modernist context with the poetry and writings of MacDiarmid. This chapter looks at his analysis of culture, the visual arts and creativity as it relates to industry, engineering and science.

MacDiarmid recalls, in The Company I've Kept. Essays in Autobiography (1966), meeting Geddes through A.R. Orage describing him as one who "...practiced synthesis in an age of specialism." [1] Given this orientation towards synthesis, then, it is unsurprising that in his poem, "In Memoriam James Joyce" (1955) MacDiarmid pays tribute to the methodology and thinking of Geddes: "And on to Patrick Geddes's 'thinking graphics,'/ Those folded squares of paper on which/ He juggled words like algebraic terms/ To gain a clearness of idea impossible/ To get through exposition alone./ - A completeness of thought,/ A synthesis of all view points,/ No one brain could otherwise grasp." [2]

Absorbing the philosophical problems Geddes had with a specialised society, MacDiarmid articulates them in a far more polemic and forceful

way than the more circumlocutory writing style of Geddes. For example, in the following passage MacDiarmid appealed for a new kind of poetry which engaged with modernity:

> "[Glasgow's] bards have all been backward-looking ruralists, spineless triflers, superior persons insulated from the life of the city in petty suburban snobberies, all utterly incapable of catching the real rhythms of Clydeside at all and all hopelessly at variance politically and in every other way with all that was really significant, really alive, in their area, or, indeed, elsewhere." [3]

This broadside on poetry might be said to be equally applicable to much of the visual arts in Scotland. The sense of dejection at lost opportunities in cultural practice in this passage echo Muirhead Bone's criticism of Scottish art in his Scotland article of 1937 (cited in Part Two, Chapter 2). MacDiarmid was not entirely despondent though, noting that the Scottish Renaissance of the 1920s and 1930s had produced a "redevelopment...of poems in Scots dealing with urban and highly industrialized life." [4] Putting MacDiarmid in context with other authors, a writer of prose who MacDiarmid knew and admired was Lewis Grassic Gibbon [James Leslie Mitchell], of whom he said the following: "We approached the Scottish question from entirely different angles at first. Leslie's main familiarity and interest was with the landscape and rural people - mine with urban life and the development of the machine age." [5] (although Gibbon's third book in the trilogy The Scots Quair, Grey Granite (1934) was concerned with the transition from rural to industrialised, urban society.)

Many of MacDiarmid's views promoted a unifying framework for human activity as against the increased specialisation developed by

industrialised society. The early influence of the publication The New Age (1907-22 at its most prominent), edited by A.R. Orage is relevant. The New Age concerned itself with a diverse range of topics all directed at a positive exploration of theory, science and contemporary culture. Its contributers included Patrick Geddes (who was general editor of articles when MacDiarmid met him), Arnold Bennett, Wyndham Lewis, Edwin Muir, T.E. Hulme, Herbert Read and Jacob Epstein.

The New Age discussed international modern movements within a United Kingdom context, based in London. Examples included articles on the Post-Impressionist exhibition of 1910, the Futurist exhibition in 1912, Dadaism and Picasso among other subjects. (Apart from the Scots, MacDiarmid, Geddes and Muir, another link between The New Age and Scotland was through the French philosopher Denis Saurat. In the 1920s, Saurat held a lecturing post at Glasgow University. [6]) An integrationist view of human disciplines was published in The New Age by Soloviev in the early 1920s and is described by Catherine Kerrigan: "Art, which he saw as always an adventure into the unknown, always a discovery of the new, was to be seen as pursuing similar ends to that of science. That is, both art and science had the task of making the previously unknown, the previously uncatagorized in experience, accessible." [7] MacDiarmid clearly responded to this holistic outlook, evidenced in his article "Art and the Unknown": "there are sciences which must transcend themselves and become something higher - that is to say Art." [8]

In connection with The New Age an important contact exists with Wyndham Lewis, who as both a writer and artist links MacDiarmid to the

Modern Movement in the visual arts and gives him a context, too, in relation to the artists MacDiarmid himself came to support by the early 1920s, such as William McCance (see Part Two, Chapter 4).

MacDiarmid and Lewis were simultaneously involved with The New Age. In an interesting passage in MacDiarmid's subsequent Aesthetics in Scotland, he cites a later publication by one member of The New Age group, Herbert Read's Art and Industry (1934), which maintains some of the strains of the Vorticist writing style of Lewis. MacDiarmid writes:

> "...I agree with Herbert Read when he says: "It is the practical men of affairs who have solved the problems of art. It is the engineers who built the Forth Bridge and the Crystal Palace, who have more recently evolved the form of the automobile and the aeroplane, who first unconsciously suggested the elements of a new aesthetic...a new tradition, based on practical realities, was formed." [9]

This, in general terms at least, encapsulates the broad views which were being expressed at the time by both the Futurists and the Vorticists in Britain.

Even into the 1920s and 1930s Lewis's writings were reviewed in magazines in which MacDiarmid was involved, such as The Modern Scot. In turn, MacDiarmid is refered to positively in Lewis's prose-poem One Way Song. Both individuals shared similar ideological positions in relation to the machine aesthetic, the role of the arts within industrialised society and cultural characteristics of their own native countries.

As Tom Normand has pointed out, however, their respective attitudes towards the machine were not necessarily similar. Normand writes, "Since my own thesis argues that Lewis's machine aesthetic was less a celebration of the machine than an ironic commentary on the absurdity of contemporary life, then you will understand I am reluctant to align Lewis's pessimism with MacDiarmid's positive assertions." [10] It is true that MacDiarmid held a firm belief in the enlightening power of science and knowledge in a way that does not come through in Lewis, and to this extent MacDiarmid did look positively on aspects of science, and, as a consequence of this positivism, the related world of industry. As Catherine Kerrigan writes: "...he did not lay the blame for the fragmented quality of life in the modern world at the door of science, nor did he ignore the need to assimilate new scientific knowledge into general experience..." [11] However, in the following passage by MacDiarmid, we can detect a certain sympathy between him and the scepticism of Lewis: "...the aesthetic structure and the social relations are as real as the primary physical qualities that the sciences were once content to isolate...This reawakening of the vital and the organic in every department undermines the authority of the purely mechanical." [12] MacDiarmid still was wary of the dehumanising potential within industrialisation and science. Although post-dating Lewis's death, the above passage was written in the context, interestingly, of a positive appraisal of Patrick Geddes, who had worked together with Lewis, on The New Age, thus indicating further connections between important writers and artists under discussion in the present thesis.

Again, utilising potent metaphors and anti-mechanical images MacDiarmid in poetry parallels the questioning attitude of Lewis in

discussing human society:

> *Erudition means nothing to them*
> *('Larvae, hallucinating automata, bobbins,*
> *Savage robots, appropriate dummies,*
> *The fascinating imbecility of the creaking man-machines,*
> *Set in a pattern as circumscribed and complete*
> *As a theory of Euclid - essays in a new human mathematic')* [13]

This type of imagery, employing both automata and scientific allusions bears an interesting comparison with the imagery of Eduardo Paolozzi (see Part Two, Chapter 7). It seems that only much nearer the time of writing Aesthetics in Scotland did some of MacDiarmid's views on modernity accept a negative slant and thus connect more closely with Lewis's earlier ideas. For example, in 1943 in 'The Future of Poetry', MacDiarmid writes: "Is poetry done for? Wars, the Robot Age, the collapse of civilisation,/ These things are distracting and annoying, it is true/ - But merely as to an angler a moorhen's splashing flight/ That only puts down a rising fish for a minute or two!" [14] Here, a dark version of modernity is portrayed as counter to creativity, but we must remember that at the same time, MacDiarmid was exploiting equally positive images of industry in, for example, his poems Shipshape (1943) and Manual Labour (1943), both based on his wartime experiences.

In his poetry and writings MacDiarmid highlights two characteristics which can be connected with the machine. Firstly is one where the human identifies with the machine as an object: in Reflections in an Ironworks [15] he makes a plea for revolution, for the workers to resist exploitation and actually become the weapons they make. (This politicisation of a munitions factory activating it as a symbol is in marked contrast to the

documentational munitions commission by Muirhead Bone, who responded more to the factory in visual, apolitical terms (see Part Two, Chapter 2).) MacDiarmid, as a poet, identifies with manual labour and the labourers themselves: there exists an intellectual aspect to labour, which consists of "the skilful manipulation/ Of material objects." [16] He states that "I am organically welded with the workers". [17] The date, 1943, coincides with MacDiarmid's employment as an engineer on the Clyde during the Second World War and thus is evidence of first-hand contact with the world of heavy industry. In The Company I've Kept he states that after the beginning of the War he qualified as a precision fitter, and was employed at Mechans of Scotstoun from 1940-1: "I was given charge of the Copper Shell Band Section, turning the bands off copper cups by a battery of power lathes, and then case-hardening them in an electric furnace. I enjoyed this work..." [18] Subsequently, from 1942 to the end of the War he worked in the Merchant Service as a first engineer based at Greenock, itself a centre of Scottish heavy engineering. Such direct and practical involvement with engineering and its products must inevitably add to the sophistication of MacDiarmid's views on Scottish art and culture and its relation to Scottish industry.

The second characteristic is the emergence of a version of the machine aesthetic presumably based on his experiences in the docks, and applied to the visual arts too. He responded to the functional completeness of, for example, a sailing ship in the poem Shipshape, also of 1943.

In his important book regarding the visual arts Aesthetics in Scotland MacDiarmid reiterated the negative aspects of industrialisation in his defence of Calvinism and Scottish nationalism: "...it is quite unjust to attribute to Calvinism a crude Philistinism which was, in fact, bred by the Industrial Revolution and aggravated by the loss of our own national roots." [19] However, the Industrial Revolution and the forms it produced through technology were, perhaps paradoxically, visually exciting and important for MacDiarmid, evidenced in his approving quotation of Herbert Read in Aesthetics in Scotland [20] This emphasis on practicality fits well with his earlier statement in "Poetry and Science" from Lucky Poet that "I seek a poetry of facts." [21]

In Aesthetics in Scotland MacDiarmid goes on to more closely identify where creativity resides and how Scotland's aesthetic mode of thought has been brought to bear on her most prominent economic achievement of the last two hundred years: heavy engineering. The following passages are quoted at length, in order to see the detail of MacDiarmid's argument:

> "What has taken place in Scotland up to the present is that our best constructive minds have taken up engineering and only sentimentalists have practised art. We are largely (the world has assessed us rightly) a nation of engineers. Let us realise that a man may still be an engineer and yet concerned with a picture conceived purely as a kind of engine which has a different kind of functional power to an engine in the ordinary sense of the term. Here then is what we Scots have - a terrific vitality combined with a constructive ability unequalled by any other nation. What more do we need? - merely sufficient analytical power to clear away the maze of sentimentality and accepted 'artistic' values which obscure our ideas of Art."

The text thus far is taken from an earlier review in Contemporary Scottish Studies, entitled "William and Agnes McCance", as words put into

the mouth of McCance himself (see also Part Two, Chapter 4). [22] MacDiarmid continues:

> "It is, however, in another homely illustration here in Glasgow with its great tradition of shipbuilding that I think I can come still closer to a definition of what we mean by art and should strive for and look for in all creative productions submitted to our judgement. No one has ever been able satisfactorily to explain - probably no one ever will be - the exact nature of that subtle process by which some man-made structure of iron, wood, or steel, is changed from a mere mass of inanimate and unresponsive matter into a thing with character, a disposition, almost a personality of its own..." [23]

It was Ian Finlay (see Part One, Chapter 3) who noted "...the long delay in achievement in the fine arts," [24] and MacDiarmid continues this line of thought, perceiving the visual arts as in need of an injection of the creative instinct that fuelled Clydeside at its height.

> "Just that capacity for a man's work to leave his hands and sustain a "life" of its own is what is required of anything that deserves the name of a work of art, and if we Scots can achieve it in shipbuilding and engineering, we ought to be able with a very slight alteration of the direction of our energies, just the matter of putting the emphasis on a different quarter, to do it in painting and sculpture too." [25]

MacDiarmid here tests the extent to which we feel the need to decompartmentalise the disciplines of aesthetics and industry and, just as Finlay a few years earlier, found the separation untenable, so does MacDairmid- "Specialisation prevents us achieving a unified picture of the world as reflected in all intellectual activities. It is the unification, the wholeness of an outlook on life, that is the sign of the maturity of a genuine culture." [26] In this synthesising ideal which MacDiarmid promotes, he surely is consciously echoing the ideas of Geddes, and it is during a

chapter on Geddes in The Company I've Kept that MacDiarmid comments that "...the aesthetic structure and the social relations are as real as the primary physical qualities that the sciences were once content to isolate...This reawakening of the vital and the organic in every department undermines the authority of the purely mechanical." [27] This anti-rationalist, pro-humanist idea is evident in Geddes' section on the Art Institute in his report to the Carnegie Dunfermline Trust of 1904 (see Part One, Chapter 2) and MacDiarmid follows Geddes' thinking in this respect. The notion of rational progress in the sciences is challenged and replaced with a more integrationist view of society which includes the creative arts, imagination and culture as well as science.

In Aesthetics in Scotland, MacDiarmid goes on to cite individual ships which for him have such a character or personality, such as the 'Queen Elizabeth'. MacDiarmid's keen appreciation of the products of Clydeside is intrinsically linked to his experience as an engineer there during the Second World War. Aesthetics in Scotland was written only five years after his experience as an engineer and must have been firmly in his mind at the time of writing his book on aesthetics.

In "Poetry and Science" (1967) MacDiarmid expands on Geddes' view that objective scientific knowledge, alternatively the discovery of the modern world, is useless without an alliance between the moral, imaginative stance taken by the arts, especially poetry, according to MacDiarmid. [28] This is a view central to his earlier poem Poetry and Science (1943), [29] (the year Fergusson published his Modern Scottish Painting), and substantiates the belief that the poet or any creative artist should be

conversent in some aspects of the world of science. In the essay "Poetry and Science" he quotes Chekhov approvingly:

> "'Familiarity with the natural sciences and with scientific methods has always kept me on my guard, and I have always tried, where it was possible, to be consistent with the facts of science...I do not belong to the class of literary men who take up a sceptical attitude towards science: and to the class of those who rush into anything with only their imagination to go upon, I should not like to belong.'" [30]

It follows, then, that the extent to which a poem of this kind can be widely effective is restricted if the poet employs unfamiliar scientific theories in their poetry. As George Davie has said: "According to MacDiarmid, the problem of the poetic communication to the populace of the conceptions of developing science is inseparable from the task of getting the populace to achieve an intelligent familiarity with the *use* of the technical terms which are requisite to express the theories." [31] MacDiarmid's attitude, that of positive absorption or at least awareness of science and modernisation, is one shared by many of the artists under discussion here.

There emerges at least three identifiable positions with regard to modernisation here which should be highlighted. One approach, criticised by Chekhov in the above passage, is willfully non-scientific in a complacent sense, and can be considered an inapproporiate response. The second is critical of the aims and methods of science in the tradition of Carlyle, which, far from being complacent, actively fears the dominance of science and industrialisation in Western society. MacDiarmid, alternatively, sees himself as an artist cogniscent of the requirements of

science, and aims to stress a generalist, positive view. The antagonism and scepticism towards modernisation associated with Carlyle is returned to as a theme with later artists of the 'post-industrial' period such as Eduardo Paolozzi (see Part Two, Chapter 7). Distinctions here are not rigid but provide a framework for analysing MacDiarmid's position.

MacDiarmid continued with the two-pronged idea that Western society needs a unifying notion of the sciences and the humanities, and that the achievements in the sciences and industry in Scotland might provide an incentive to Scottish culture, in his autobiographical book The Company I've Kept. There he writes:

> "It seems to me a very serious matter if the stream of our imaginative prose cannot rise to the level of, and carry with it, the great Scottish figures who have contributed so splendidly to science and philosophy, but neglects the link between scientific thought and humanism personified in these men; and it will, I think, be very grave for the future of our culture if this underestimation of the scientific investigation of the problem of culture proves more than a temporary phenomenon. As matters stand, compared with the way in which our national genius has expressed itself in science, philosophy, economics, engineering and industrial organisation, all that our novelists are achieving seems to me to resemble nothing so much as the yammering of a man without a roof to his mouth..." [32]

MacDiarmid's preoccupation was with poetry and literature but he was also refering to Scottish culture in general, including the visual arts. By the time The Company I've Kept was published, culture had undergone major changes and in this context, MacDiarmid took the opportunity to criticise the excesses of the Pop Art movement, current in 1966, and initiated by artists such as Paolozzi. In the words of MacDiarmid, "...the pop artist does not address any audience, does not represent any point of view; he

has staked everything on nothingness..." [33] This is an unfortunate generalisation, no doubt due to MacDiarmid's intellectual background in the positivist ideology of the 1920s and 1930s, as his discernment of a nihilism in contemporary Pop Art. However this view is limited and does MacDiarmid little service, especially as early protagonists of what was to become Pop Art in Britain, such as Paolozzi, undertook a serious critique of the interface between industry and art (see Part Two, Chapter 7).

In general, though, it is clear that MacDiarmid held sophisticated views on art and industry within Scottish culture, building upon the intellectual foundations established by Geddes and closely connecting with the writings of Ian Finlay and J.D. Fergusson.

NOTES
Part One, Chapter 4. Hugh MacDiarmid and the Visual Arts

1. Hugh MacDiarmid, The Company I've Kept. Essays in Autobiography, London: Hutchinson, 1966, p.79

2. The Complete Poems of Hugh MacDiarmid, 2 vols, (Michael Grieve and W.R. Aitken, eds.), Harmondsworth: Penguin, 1978, p.801

3. "The Scottish Renaissance: The Next Step" (1950) in Selected Essays of Hugh MacDiarmid, (Duncan Glen, ed.), London: Jonathan Cape, 1969, p.109

4. Ibid., p.213

5. "Lewis Grassic Gibbon", ibid., p.190

6. Saurat published a serialised form of his The Three Conventions (1926) in The New Age and also published an article entitled "Scottish Intellectualism: William Johnstone" in The Studio, August, 1943.

7. Catherine Kerrigan, Whaur Extremes Meet. The Poetry of Hugh MacDiarmid 1920 -1934, Edinburgh: The Mercat Press, 1983, p.50

8. The New Age, 20/27 May, 1926, cited in Selected Essays of Hugh MacDiarmid, op. cit., p.48-49

9. Hugh MacDiarmid, Aesthetics in Scotland, (1950) (Alan Bold, ed. and intro.), Edinburgh: Mainstream, 1984, p.87

10. Normand - Patrizio correspondence, 19 March 1991.

11. Kerrigan, op. cit., p.1

12. The Company I've Kept, op. cit., p.81

13. "In Memoriam James Joyce" (1955) in The Complete Poems of Hugh MacDiarmid, op. cit., p.883-4

14. In The Lucky Poet (1943), in The Complete Poems of Hugh MacDiarmid, op. cit., p.657

15. Second Hymn to Lenin and Other Works (1935), in The Complete Poems of Hugh MacDiarmid, op. cit., p.555

16. "Manual Labour", Lucky Poet (1943) in The Complete Poems of Hugh MacDiarmid, op. cit., p.656

17. Ibid., p.656

18. The Company I've Kept, op. cit., p.187

19. Aesthetics in Scotland, op. cit., p.27

20. Ibid., p.87

21. The Complete Poems of Hugh MacDiarmid, op. cit., p.630

22. Hugh MacDiarmid, "William and Agnes McCance", Contemporary Scottish Studies, 20 November, 1925, p.58-9

23. Aesthetics in Scotland, op. cit., pp.87-90

24. Art in Scotland, op. cit., p.168

25. Aesthetics in Scotland, op. cit., p.90

26. Ibid., p.41

27. The Company I've Kept, op. cit., p.81

28. Selected Essays, op. cit., p.246-7

29. Collected Poems, op. cit., p.630-1

30. Selected Essays, op. cit., p.246-7

31. George Davie, "On Hugh MacDiarmid", Cencrastus, No.25, 1987, p.16

32. The Company I've Kept, op. cit., p.20

33. Ibid., p.78

PART ONE, Chapter 5

ART THEORY AND WILLIAM JOHNSTONE

William Johnstone (1897-1981) pursued careers as a painter and as an influential educationalist. He held the post of Principal both at Camberwell (1938-46) and Central School of Arts and Crafts (1947-60) in London. His mature painting, an individual interpretation of organic, abstract Surrealism, is of little direct relevance to this thesis, although some of his very earliest work which shows the influence of Léger and others will be discussed. His ideas in the educational field, however, are strongly bound up in art's relationship to industry.

At an early stage in his artistic development, Johnstone notes his admiration for aspects of Vorticism, a movement intrinsically bound with the interpretation of industrialisation: "As a young student I had greatly admired a large Vorticist painting of soldiers disembarking by William Roberts which had been exhibited in Edinburgh." [1] Johnstone was at that time studying at Edinburgh College of Art (1919-23), however, he does not elaborate on the precise qualities he admired, but Roberts' strong sense of design may be significant as this was a characteristic which was to become of great importance to Johnstone both in his teaching and his art. Roberts' subject dealt directly with contemporary experience and the work Johnstone saw certainly came from the period when Roberts, as one of the leading Vorticists, had been employed as an Official War Artist. Similarly,

in Points in Time he described, with enthusiasm, the early development of modernism before the First World War: "The years before 1914 were pregnant with the explosive ideas in art, music, literature and science which have effected all serious thinking of this century in a positive way. Cubism, Futurism, Vorticism, Expressionism, Suprematism, Dadaism..." [2] Here Johnstone places Futurism and Vorticism high on the list, clearly showing his interest in these movements. This interest, obviously not evidencing itself strongly in his own mature art, was nevertheless positive, as is evidenced by his perceptive appreciation of Wyndham Lewis:

> "Percy Wyndham Lewis, the black crow, felt that the great men were Eliot, Pound and Joyce; in art, Picasso and Picabia. I sympathized with this intransigent attitude as, after living in France and America, I had found British art to be predominantly amateur...Percy, who was gifted both intellectually and visually, had a brilliant and complex personality. Aloof and reserved, the duality of his interests in both science and art made his introverted life far from easy...Percy was convinced that the great modern art movements could not have been realized solely by emotional or painterly means; that there must be an intellectual basis behind the intuitive or instinctive use of paint or stone to keep art in line with current scientific perception and analysis...He excluded altogether the personal involvement of the artist." [3]

As Douglas Hall observes, writing of the early 1930s: "Lewis remained for him the greatest English artist of the time...Lewis's Vorticism had been forgotten and 'Modern Art' was still hardly known on the London scene." [4]

In this context, we can see that as a young artist, Johnstone had been impressed by Roberts' painting and presumably other members of the Futurist and Vorticist groups when a student in Edinburgh. This may explain why he went at an early period in his career to Léger's Paris studio on his first visit there in 1925. This represents his first contact

with modernism in art. Hall describes Johnstone's arrival in Paris thus: "He went to see Amadée Ozenfant, the 'Purist' painter, Fernand Léger, who wanted to take him as a farmer's son like himself, and André L'Hôte. Surprisingly, Johnstone chose L'Hôte, as had many other students from Edinburgh." [5] Foliés Bergéres (1927) is a typically hard-edged work produced in this period. It portrays machine-like figures in a mixture of Cubist and Futurist styles. Also in a similar vein is Abstract Nativity, also of 1927 (now lost).

Johnstone, by showing a keeness to explore contemporary forms of artistic modernism such as those pursued by Ozenfant, Léger and Lhote, gives ample evidence of his broad, generalist enthusiasms at this early stage. Furthermore, in his desire to follow a rigorous education founded on strong design, the basis of the teaching in L'Hôte's studio, as well as his awareness of modernist styles which engaged with contemporary experience, he showed important influences which can easily be forgotten when one looks at his early career only in the context of his later painting. In the future, when Johnstone developed his own ideas on how art could interface usefully with industry and the world beyond art, his integrating vision was brought to bear in this different field.

The move towards Léger in 1925 bears analysis, although it was not an avenue which Johnstone pursued. In Points in Time, written retrospectively, Johnstone describes what he sees as Léger's crucial position in twentieth-century art, and perhaps also highlights why Johnstone himself found Léger so central: Léger's

"...departure from nature and his zealous exhortation of the

> beauty of urban civilisation, the machine age and modern science suggested in some way to one a neo-Pre-Raphaelite approach.
>
> The problems of modern man in relation to his environment, his efforts to adapt himself to modern science and machinery, when his whole life history has been a harmonious relationship with the earth, have been perfectly expressed in Chaplin's films and in those of Laurel and Hardy. A new urban art has emerged based on modern science and city development. Léger seems to me to be the lynch-pin in this change. On the battlefield as a gunner he saw a new beauty in destruction and he painted the portrait of man in this new relationship." [6]

Johnstone here is interested in Léger's machine aesthetic and his broad concern with man's relationship to modernity rather than Léger's pursuit of a political art as such. Earlier in Points in Time, Johnstone had described his first contact with politics, chiefly through Red Clydeside where, he states, "I listened with a great deal of sympathy to Willie Gallacher...But as much as I sympathized, I felt that politics were not for me, and that I should stick to art." [7] His sympathy with left wing politics did not, it seems, have any direct effect on his own art nor was it as so explicitly held as many of his associates in the Scottish Renaissance movement.

The Scottish Renaissance

Although at an early stage Johnstone moved away from Scotland, returning only in 1960, he maintained associations with leading Scots figures. He knew Francis George Scott, the composer and close friend of MacDiarmid and William McCance. Through Scott he met MacDiarmid who may have been responsible for his contact with A.R. Orage and The New Age magazine in London. Connections with The New Age also point, then, to links with

Patrick Geddes, and may help to explain Johnstone's catholic, synthesising approach. Through MacDiarmid and his prominent professional status, he was in contact with many other figures of the Scottish Renaissance. Johnstone notes his contact with the artist Hugh Gordon Porteous, whom he describes as a devout follower of Wyndham Lewis. [8] In talking broadly about the developments in art as he perceived them since 1900, in the following passage he shows a theoretical approach remarkably close to the integrationist views of Geddes and MacDiarmid, as well as the interconnection between creativity and engineering explored in writings such as those by Ian Finlay, J.D. Fergusson (see Part One, Chapter 3) and William McCance (see Part Two, Chapter 4):

> "In this period of extension, science and art became closer together than they had been for a very long time. Adventures in art ran parallel to adventures in the scientific world. Art was beginning to find its lost reality, to become again a necessity of living, an extension of being, until we find that today science and engineering have created new art forms on a majestic scale. A new art that really belongs to life has grown without our ever noticing that is has happened, in the design for solar heating, for radar, for nuclear experiments, for extracting energy from the sea. This is art on the scale of the Egyptian pyramids beside which the artefacts of the art school or West End gallery seem childishly puny. Art has moved back into the life of our times with a vengance." [9]

The Arts and Crafts Movement

In Johnstone's writings he identifies his influences as an educationalist as based in the tradition of the Arts and Crafts Movement. In 1919, when entering Edinburgh College of Art as a student, the Principal at that time was Morley Fletcher who had taught wood engraving at Central School of Arts and Crafts. Fletcher was a disciple of William Richard Lethaby (see

Part One, Chapter 1). As Johnstone writes, contact with Fletcher, "...encouraged me to read Lethaby's books which interested me enormously." [10] Another figure of interest connected with the movement was Fra Newbery (1855-1946), Director of Glasgow School of Art, and described by Johnstone in the following terms:

> "Glasgow Art School under Fra Newbery made the only vital contribution in Scotland to the art of its time. He was a disciple of the Arts and Crafts movement. William Lethaby at the Central School of Arts and Crafts in London had changed the whole structure of art education at the beginning of the century and Newbery, himself no mean painter, held to the tenets of Lethaby and the Art Workers' Guild." [11]

Johnstone does not state whether he was aware of Newbery's thinking during his student days in Edinburgh but may well have been directed to him through Fletcher. Newbery, an important and influential figure in Scotland, was director of Glasgow School of Art when Muirhead Bone and other artists trained there.

Johnstone's involvement with the ideas of the Arts and Crafts Movement did not mean merely an attention to finish and materials but the search for a way in which these aspects could be brought to bear usefully on contemporary life. He comments that, amongst the staff at the Central, "...too much excellent work appeared to be geared solely towards the Arts and Crafts Exhibition Society, and not enough towards present-day living. The challenge would be to relate this exceptional craftsmanship to modern needs; in other words, how to return to Lethaby's first principles." [12] Johnstone, in this statement, can be seen to be identifying also with the principles of the Bauhaus in Germany which itself developed ideas initiated

by the Arts and Crafts Movement regarding truth to materials, function and an intergrated view of society.

The Bauhaus

Johnstone's awareness both of the principles of the Bauhaus and how it developed with those of the Arts and Crafts Movement profoundly affected his ideas on art education. The Central School under Lethaby, notes Johnstone, "became the parent of the Bauhaus," [13] and Johnstone saw himself continuing and strengthening this tradition of maintaining studio workshops, part-time teaching to allow craftworkers/teachers to develop their own skills and a type of guild apprenticeship served by the art college students. He describes the history of the Bauhaus thus:

> "...following in the footsteps of Lethaby, the founding of the Bauhaus marked a decisive step in showing, in an extremely practical way, how visionary and exploratory art, stemming from the Cubist and Expressionist movements, could relate to industrial arts. The writings of Gropius and Moholy-Nagy profoundly affected art teaching in this country and America. They showed a new grammar by which art teaching was seriously related to the important changes in art values since 1900, a system based on genuine plastic and spatial experiences." [14]

Johnstone here is not merely repeating historical fact but approvingly highlighting a tradition to which he feels he is extending.

In the late 1920s and then more frequently in the 1930s, Johnstone came into direct contact with members of the Bauhaus. He made a number of visits to the United States (from 1928 onwards), where, for example, he met Walter Gropius at Harvard, Gyorgy Kepes at the Massachusetts Institute

of Technology and Max Beckmann at Boston. Similarly, Johnstone notes that when Gropius had stayed in England after fleeing from Nazi Germany, like many other important Modernist figures, he was a member of Central School's Advisory Committee. [15] The arrival in England over the 1930s of important artists in Europe fleeing Fascism marked an important point of influence in England and Johnstone's contact with Gropius and Moholy-Nagy, for example, show that he was at the focal point of this renaissance in British art. Clearly, Johnstone's contact with the Bauhaus and the branch of Modernism it represented was thorough and informed, vitally influencing his ideas on art and industry.

Some of Johnstone's skills and experience in teaching industrial design, described in an article by Ian Tregarthen Jenkin, concern his early part-time job at Regent Street Polytechnic in 1932:

> "In the Craft Studios, for example, his experience with agricultural machinery was invaluable for students in Motor-body building, in helping them to consider the relation between the need for design and the requirements of engineering. Two dimensional patterns and solid forms were jointly discussed and evaluated, in regular designer/engineer consultations." [16]

It was Johnstone's early experiences on a farm in the Borders which involved first-hand contact with industrial design and its practical problems to which Jenkin refers.

A.E. Halliwell, a follower of Bauhaus philosophy was brought to Central by Johnstone to teach basic design. It was through the teaching of basic design skills to the students that Johnstone sought "...to

synthesize the different Schools [within the art college] into a far more integrated unity." [17] All students would have a similar basic art education which could then be applied to their different specialities.

> "In my case, my teaching of basic course stemmed directly from my experiences of the School of Paris at L'Hôte's studio. This could, I felt, give a greater depth and a more imaginative approach to the subject than the somewhat limited (even sterile) approach of the Bauhaus, which by this time was beginning to be a new academy." [18]

Johnstone's now more critical stance toward the Bauhaus, shows, however, his mistrust of any overly-institutionalised, rigid form of art education despite his debt to the German phenomenon. In contrast, after his students had completed Halliwell's Industrial Design course at Central, "...they understood both the problems of industry and the problems of art. I saw these young designers as the spearhead, infiltrating British industry with a wholly new outlook on design." [19]

When Principal at Central School he had been a long-serving member on the Council for Industrial Design, whose remit was to improve design standards in industry. In this connection Johnstone gives a very sympathetic summary of the industrialists' perspective: "They had seen far too much superficial covering of machinery which was beautiful in itself and should have been left exposed. They could understand the beauty and mathematics of function, and the most economic use of their materials, but they could not understand 'art'." [20] This re-iterates the functionalist perspective proposed so forcefully by Benjamin Baker and finding expression in the photographs of Evelyn Carey (see Part Two, Chapter 1). Functionalism, as proposed by Baker, was a reaction against the Victorian

propensity to over-decorate and hide the true function of the object. In the twentieth century this anti-Functionalist inclination did not die out, as marketing and design techniques sought to vary the outer appearance of commercial products. Clearly, Johnstone objected to over-elaborate masking of function as much as Baker did in the previous century.

In addition to his teaching activities, Johnstone published much work on education, art and industry in order to circulate his views which subsequently have become highly influential. Examples of such publications are "Unity of Art and Industry: Science as the Key to Partnership" [21] and "Training Students in Commercial Art and Industrial Design." [22]

Johnstone's role as a Principal of art education establishments meant he had a very influential position in appointing staff whom he considered of outstanding ability. In this he showed himself to be remarkably far-sighted, employing a generation of important British artists. For instance, he recalls giving Reyner Banham his first teaching post, at Central School. Later Banham wrote the seminal Theory and Design in the First Machine Age which laid down the standard history of modern industrial aesthetics. [23] Other appointments included Alan Davie, Eduardo Paolozzi, Richard Hamilton and Victor Pasmore, all of whom developed a sophisticated awareness of industrial design and processes, and their relationship to aesthetics. Paolozzi's considerable contribution to issues of Functionalism and industry within art, instilled in part by Johnstone, is discussed in detail in Part Two, Chapter 7.

NOTES
Part One, Chapter 5. Art Theory and William Johnstone

1. William Johnstone, Points in Time: an autobiography, London: Barrie and Jenkins, 1980, p.230

2. Ibid., p.216

3. Ibid., p.163

4. Douglas Hall, William Johnstone, Edinburgh: Edinburgh University Press, 1980, p.40

5. Ibid., p.13

6. Points in Time, op. cit., p.82-3

7. Ibid., p.79-80

8. Ibid., p.155-6. Porteous was the author of various articles including "Art: Johnstone", The New English Weekly, Vol.7 No.9, 13 June, 1935 and "Art", The New English Weekly, Vol.14 No.24, March 1939.

9. Points in Time, op. cit., p.216-7

10. Ibid., p.58

11. Ibid., p.78-9

12. Ibid., p.219

13. Ibid., p.211

14. Ibid., p.217

15. Ibid., p.242

16. "William Johnstone: His Contribution to Art Education", William Johnstone London: Arts Council of Great Britain, 1980, p.16

17. Points in Time, op. cit., p.220

18. Ibid., p.220-1

19. Ibid., p.273

20. Ibid., p.272-3

21. The Times Review of Industry, Vol.2, No.23, New Series, December, 1948

22. Art and Industry, Vol.38, No.226, April, 1945

23. Points in Time op. cit., p.233

CONCLUSION (Part One)

Before advancing in Part Two a more detailed treatment of particular Scottish artists who have undertaken industrial subjects, it should be emphasised here, at the conclusion of Part One, that there existed clear and identifiable continuities between those who sought to establish theoretical foundations of how art and industry might interact, examined in Part One.

In a lecture delivered in 1905 under the title "Civics: As Concrete and Applied Sociology", Patrick Geddes made a series of crucial observations which assist in clarifying these continuities, whilst also providing the context for many of the artists discussed in Part Two. Under a subsection entitled "Glasgow as Typical of Civic Transition - From 'Paleotechnic' to 'Neotechnic'" Geddes writes:

> "My own appreciation of the significance of Glasgow was first really awakened over twenty years ago by William Morris, who in his vivid way pointed out to me how, despite the traditional culture-superiority of Edinburgh, Glasgow was not only the Scottish capital, but, in his view, in real progressiveness the leading and initiative city of the whole United Kingdom." [1]

Thus Geddes makes clear his intellectual debt to the Arts and Crafts Movement, in particular in sharing Morris's appreciation of Glasgow as an important modern city.

Geddes goes further, proposing a political and humanist dimension to this equation:

> "And this for him [Morris] was not merely or mainly in its [Glasgow's] municipal enterprise, then merely in its infancy - although he expressed this development in the phrase 'In London, people talked of socialism without living it; but in Glasgow, they were socialists without knowing it!'...Morris's appreciation arose from his craftsman's knowledge and respect for supreme craftsmanship. The great ships building upon the Clyde were for him 'the greatest achievement of humanity since the days of the cathedral-builders,' nay, for him actually surpassing these, since calling forth an even more complex combination and 'co-operation of all the material arts and sciences' into a mighty and organic whole; and correspondingly of all their respective workers also, this being for him of the very essence of his social ideal...On the Clyde industrial organisation and social progress could not but develop together, through the very nature of the essential and working unity of the ship." [2]

From this crucial summary of Morris, Geddes draws out the point that Glasgow can be seen as a living example of a city extolling Arts and Crafts virtues through its industrial production, providing an organic example of how arts and sciences could unite. Collective endeavour, symbolised by shipyard construction, is central to Morris's and Geddes's ideal and one which was then continued and developed by Ian Finlay, MacDiarmid and Fergusson in the 1930s and 1940s (discussed in Part One). The example of shipbuilding was used often in the texts of these three latter writers as a metaphor for a culture and society operating properly.

Concerning the work of some of the artists themselves, as will be seen in Part Two, visual associations between cathedral-building and shipbuilding underlie Evelyn Carey's photographs of the Forth Rail Bridge (see Part Two, Chapter 1) and Muirhead Bone's urban and industrial images (see Part Two, Chapter 2). Furthermore, Carey's photographs were being produced contemporarily with Arts and Crafts theory and the emerging

presence of Geddes, and it is Geddes who can be seen recurring as a reference point for the practical art discussed in Part Two.

Given Morris's and Geddes's position on Glasgow cited above, it is entirely appropriate that many of the artists discussed in Part Two found equally powerful inspiration in that city, such as Bone, J.D. Fergusson, Ian Fleming and the Clyde Group of painters. As a densely industrialised conurbation, Glasgow was unavoidably modern and by far the most important city in Scotland for artists who wished to interpret the industrial landscape.

NOTES
Conclusion (Part One)

1. Patrick Geddes, "Civics: As Concrete and Applied Sociology", (Part II, 23 January, 1905, University of London). Reprinted in The Ideal City, (Helen Meller, ed.), Leicester: Leicester University Press, 1979, p.169

2. Ibid., p.169

PART TWO, Chapter 1

EVELYN CAREY AND THE CONSTRUCTION PHOTOGRAPHS OF THE FORTH RAIL BRIDGE

Introduction

This chapter discusses the photography associated with the construction of the Forth Rail Bridge, especially that by Evelyn George Carey (1858-1932). It examines the context and intentions of these ostensibly documentary photographs. It is proposed that the photographs of the Forth Rail Bridge by Carey and others have many important implications in terms of demonstrating an industrial aesthetic and connecting topographical and documentational traditions to the fine arts. As F.D. Klingender has written of artists of the late eighteenth and early nineteenth centuries:

> "...while many of the artists of the time lost themselves in academic banalities, retired into the picturesque, or else sought an escape from contemporary life in colourful visions of an imaginary past, the straightforward desire to record the achievements of the engineers continued to inspire many unassuming draughtsmen and illustrators. The story of the art inspired by the industrial revolution ends, as it began, in the humble sphere of documentation." [1]

It was not only draughtsmen and illustrators but photographers too who continued developing this "humble sphere" after the middle of the nineteenth century. The photographic record of the building of the Forth Rail Bridge and its artistic and historical associations set a suitable context for the study of twentieth-century images of industry, discussed in subsequent chapters.

Evidence suggests that it was a Scotsman, Alexander Gordon (1802-1868), who was the first person on record to note photography's suitability as an aid within the field of engineering. [2] In a paper delivered to the Institution of Civil Engineers in 1840, entitled "Photography, as applicable to Engineering." Gordon pointed out that photography would enable "views of buildings, works, or even of machinery when not in motion, to be taken with perfect accuracy in a very short space of time and with comparatively small expense." [3] This, significantly, was written only a year after photography's invention and within a few years Gordon's speculations were being put into practice. [4] Construction work in engineering clearly had much to benefit from the invention of photography, not only for informational purposes but also for aesthetic and promotional interest.

The Forth Rail Bridge as an Engineering Structure

The aims of the official photography of the Forth Rail Bridge is crucially tied to the context of the Bridge itself, therefore this section looks at the background of its construction.

Primarily the function of the Bridge, built between 1883 and 1890, was to enable business and commercial traffic to go north to Dundee and Aberdeen, and tourist traffic to have easy access to the Scottish Highlands. However, from its outset the engineers who built it and the public who paid for it demanded that it perform more than purely utilitarian functions. The Victorian engineering profession had accumulated an extremely high reputation by the middle of the nineteenth century, through the construction of Paxton's Crystal Palace (1851), for

example, and the prominence of great engineers such as Isambard Kingdom Brunel (1806-59) and Robert Stephenson (1803-59). The erection of monuments to industry such as the Forth Rail Bridge became symbolic performances through which Victorian Britain reasserted its status as a progressive society.

A Leeds newspaper of around 1884, reporting on a local lecture by the Bridge's designer, Benjamin Baker, proclaimed that "The engineers, with their gigantic works, sweep everything before them in this Victorian era..." [5] The building of the Forth Rail Bridge is a task "...as impossible as the construction of the Tower of Babel" and will "...as a triumph of engineering skill eclipse the Ship Canal which has turned Africa into an island, reduce the pyramids to mere child's play, and, in all likelihood, lead to a revolution in the art of constructing bridges of this description." [6] Baker's task, as Michael Baxandall points out in his book Patterns of Intention,

> "...was not purely to span a specifically conditioned gap. It was, one could argue, to do it neatly, impressively, expressively...The Bridge was, in a subsiduary aspect, a publicity exercise...It was to be strong eloquently and with panache...One suspects that Baker would not have considered himself as working solely to the directors of the Forth Bridge Railway Company: he was working also to his professional colleagues and rivals, and to a society." [7]

The role regarding the construction of the Forth Rail Bridge in this context is clear: it was being required to hold a position as near to propaganda as to documentation. [8]

In this context, the vast scale and high profile of the building of the Forth Rail Bridge was designed specifically to dispel the cloud which had descended over the name of British engineering after the collapse of Thomas Bouch's Tay Bridge on the 28 December, 1879, when 75 people were killed. The psychological impact of the Tay Bridge Disaster on the nation was great. [9] Photography was one of the chief means by which the desired high profile could be maintained, and the newly imposed spirit of crisis engendered by the Tay Bridge Disaster somewhat abated. For this reason the construction of the Forth Rail Bridge became of even greater interest than would be expected, both in Britain and abroad.

An important characteristic of the notion of progress as it was understood by Modernism was that its stages could be clearly demonstrated. Thus accumulated progress could be precisely charted. In this context, the sequential photography of Carey's was a demonstration of this rational principle, established since the seventeenth and eighteenth centuries. [10] Although Victorian Britain had been developing theories for many years critical of progress and the conditions which industrialisation brought, for large scale symbolic enterprises, of which the Forth Rail Bridge is a quintessential example, such qualms were given low priority. As a consequence the two themes strongly associated with the photography of the Bridge were a positive view of industrial progress and a concentration on the theme of reconstruction.

The Photographs of the Forth Rail Bridge

The official photographer of the Forth Rail Bridge was Evelyn Carey and it is his work which will be discussed in greatest detail. However, established photographic firms such as those of George Washington Wilson and James Valentine also took photographs for commercial purposes during the Bridge's construction.

Evelyn Carey joined the office of Sir John Fowler and Benjamin Baker in 1881 at the age of 22, after having trained as an engineer in London. Two years later, in 1883, when Fowler and Baker were appointed consultant engineers to the building of the Forth Rail Bridge and when Carey was still only 24, he was made an assistant engineer for the project. [11]

Carey was given a highly specific commission with no remit to experiment and express individual ideas, and, as an engineer we can be sure that Carey would have had no such aspiration. In this sense, his photography of the Bridge lies to a great extent outside the traditional boundaries of art.

Specialist, as well as popular, publications followed the progress of the bridge through its photographs, identifing Carey as the photographer responsible. The magazine Industries of 1888, recognising the quality of Carey's work, took the unusual step of crediting four of his photographs. [12] Industries (5, August, 1887) told its readership that, "Illustrations showing various details of the Forth Bridge in different stages of its progress have already been published from time to time in 'Industries'...and our readers may find these references of service in tracing out this great undertaking from its first rise." [13] Carey could hardly fail to be aware

of the multiple services his photography was obliged to provide - at the same time it had to be a record of progress for the clients, a source of technical information for engineering specialists both internal and external to the work, as well as keeping informed the general public and non-specialists who concentrated on its inherent newsworthiness.

It is difficult to evaluate the possible influence of Carey's series of photographs, yet we can be sure that within the field of industrial photography these would have been some of the best known to date. The magazine The Engineer used full page half-tone reproduction for the first time when they published two of Carey's photographs in the issue of 2 August, 1889. This technique facilitated easier reproduction in magazines worldwide, so for this reason too, access to these photographs would have been more extensive than many previous. [14] (It could well be argued that such visual imagery, reaching the public through photographic reproductions in the press and in magazines, would have had a great influence on other visual arts like printmaking and painting, and thus help to heighten the awareness of industry as a visual source generally.

Carey's massive series runs to 468 photographs in total, a number of which were collated into official bound volumes. Many of the earlier photographs are of little artistic interest, as Carey was merely recording the area around North and South Queensferry before major work started on the Bridge. Though even with little work in progress at this point Carey produced an excellent photograph looking down on men taking soundings prior to siting the underwater piers: No.32 The Forth Bridge. Sounding

around sites of deep piers off Inchgarvie. June 18th 1884 [Fig. 1]. Great care has been taken in composing the picture and the detail allows us to see clearly the equipment and processes used. Yet even at this early stage Carey still allows, in his inclusion of a sailing boat in the background, a reference to the earlier, soon obsolete method of crossing the Firth of Forth. In this context, the photograph can be seen as a subtle comment on the idea of progress. Another fine early photograph is No.24 The Forth Bridge. Caisson of Inchgarvie NE main pier looking East. April 11th 1884 [Fig. 2] which shows the caisson being flooded with water. Around 1886, when the foundations had been sunk, work started on the superstructure. It was at this point that the dramatic qualities of the Bridge became apparent and provided better subjects for Carey.

Some views were obtained from within the incomplete cantilevers which involved great effort considering the cumbersome equipment. These close views are unique to Carey as no other photographer was permitted access on the Bridge while still unfinished. During its construction commercial photographers such as James Valentine and George Washington Wilson had to photograph from the shore or along the permanent way. [15]

The high technical quality and precision of Carey's series was designed to show as accurately as possible the progress of the structure as it extended over the Firth of Forth. For clarity, most of the photographs were taken in relatively weak light, as strong light would make it difficult to read the detail within the shadows. This gave the best conditions under which to clearly demonstrate the structural techniques used on the Bridge. (As an example of how precisely the

photographs were documented, in one series comprising forty three original prints, held by the National Library of Scotland, photographs are inscribed on the reverse, some identical to Carey's series. For example, on one there is written ""End on" looking north into the South Cantilever from masonry at end of approach viaduct May 29th 89. The same evening staging was put up connecting it with the mainland. 40 feet between masonry and ironwork." [16] Such intimate knowledge of where the photograph was taken from and how construction was continued suggests that the inscription on the back may have been written by Carey himself.)

The Workforce

Many photographs of the Forth Rail Bridge are concerned with structural detail, on its scale and its aesthetic. It does not place the actual construction workers in a central position. In part this certainly reflects the concerns of Victorian industry. The demotion of the worker as a subject in many officially commissioned photographs of the Victorian era has recently been explained as, "the inevitable consequence of an obsessively hierarchical and materialistic culture of which photography was merely a product and a reflection." [17] However, a few photographs in the series could be said to have a degree of human interest. One such image is No.270 The Forth Bridge. Riveting top of strut 1 Queensferry NW. June 18th 1884 **[Fig. 3]**, a depiction of men riveting high on the Bridge. The inaccessibility of workplaces on the Bridge must have posed particular problems for Carey in taking his photograph, yet here the camera has been able to show an area of work experience which would have been previously out of sight of the public.

However, for the majority of photographs the presence of figures was to allow the viewer to read the scale of the Bridge, for example No.236 The Forth Bridge. Junction of tie 1 and strut 2 Queensferry NE February 16th 1888 **[Fig. 4]**. This has been a common technique throughout the history of industrial photography, evidenced in, for example, Joseph Cundall's series of photographs of 'The Great Eastern' under construction (1855). Regardless of the hardships that were necessarily involved in building the Bridge (57 people were killed over its seven years construction period: around one every six weeks) it was its symbolic value which took precedence. As Baxandall says, the Bridge was a "monument to the fluency of the Victorian money market, competitive capitalism, a class structure that valued steel fitters less than railway directors..." [18] During the work done under the caissons using compressed air, where Carey tackled new technical problems associated with those conditions, Westhofen recounts that two men died when a caisson slipped its position, as well as recalling that "Another man became insane, and had to be sent back to his own country." [19] Westhofen, as an engineer on the site, offers interesting evidence of the professional class's view of those who worked for them. We have no evidence of Carey's view of manual workers on the Bridge, although his work seems rarely to be directed at the working conditions and life during the construction of the Bridge. [20]

A View from the Bridge

The degree to which the geometry of the Bridge contrasted with the surrounding landscape was observed by Westhofen, in his detailed description of the building of the Bridge in 1890, to be extreme and

irreconcilable:

> "The country immediately surrounding the site upon which the bridge now stands is strikingly beautiful. Whatever opinion may be held in regard to the lines of the bridge itself, it must be conceded that this bridge or any other bridge must be a discordant feature in a pastoral landscape...the lines of the bridge itself in geometrical repetition - with severe regularity - of triangles and squares, cannot be made to harmonise in the least degree with the soft and undulating lines of the adjoining landscape...by far the best view of the bridge is obtained from the river, whether above or below, at a distance of a mile or so, the structure rearing itself to a great height, and being backed only by the sky. Thus viewed, its simple lines, its well-proportioned parts, its impressive air of strength and solidity and yet lightness and grace, never fail to strike the mind of the beholder." [21]

Carey's more distant views clearly allowed him to stress the drama and physical scale of the Bridge. In No.318B. The Forth Bridge From Blackness Castle. March 31st, 1889 **[Fig. 5]**, for example, the Bridge lies a few miles in the distance where its massive scale can be seen to rival the surrounding landscape. It becomes a symbol of the Victorians' efforts to match the natural world with the products of industry.

One of the prerequisites of the design for the Bridge was that its cantilevers had to be self-supporting during construction. This gradual extension, over four years, was appreciated as a climactic aspect of the Bridge's construction. Sir Robert Purvis wrote:

> "From year to year the wonder grew, as the mighty piers slowly arose out of the sea and the ascending columns climbed ever higher and higher," and "More and more was the amazement as, week by week, the columns were perceived to be throwing out enormous, far reaching growths on either side. Each of these was ever increasing in weight and altering in shape but ever in prefect balance." [22]

This inevitably had an effect on the qualities of the Bridge as experienced by the photographer. He experiments artistically on the theme of balance in No.294 The Forth Bridge.[illegible] September 8th 1888 **[Fig. 6]** by waiting until low tide so as to catch the reflection of the cantilever in the water. As well as emphasising the equilibrium and balance of the construction over this phase, Carey also expresses the feeling of gradual extention across the Forth in many of his photographs of the superstructure, for example, No.293 The Forth Bridge. Inchgarvie main pier. N. Cantilever. September 4th 1888 **[Fig. 7]** which shows shoreline buildings dominated by the Bridge extending over and to the right of the composition. In both this and No.220 The Forth Bridge. Fife main pier from coastguard station. December 20th 1887 Carey reveals an area to the right of the Bridge alluding to its eventual extention into that area. In this way he creates a feeling of potential growth. Works such as No.332 The Forth Bridge. Method of erection. May 24th 1889 **[Fig. 8]** and No.324 The Forth Bridge. Queensferry North Cantilever. Bottom member and Inchgarvie main pier. April 15th 1889 rely for their power on the increase in visual tension as the arms of the cantilevers converge. From an engineering perspective, this visual tension would be matched by a large degree of professional anxiety experienced by the engineers as the ultimate test approached: that the cantilevers met exactly as they were projected to do.

The precision and clarity of Carey's photographs do make them appear now as highly modern in comparison to other genres of contemporary photography, yet the issue of precision versus a certain ambiguity in photography had already been aired thirty years before Carey started his

commission. This was most notably by Sir William J. Newton in his 1853 article entitled Upon Photography in an Artistic View, and its Relation to the Arts, who wrote,

> "I do not conceive it to be necessary or *desirable* for an *artist* to represent or aim at the attainment of every minute detail...on the contrary, I have found in many instances that the object is better obtained by the whole subject being a little *out of focus*, thereby giving a greater breadth of effect, and consequently more *suggestive* of the true character of nature." [23]

The active encouragement of vagueness in photography illustrates an intention towards subjectivity and evocation rather than objectivity and description. In much industrial photography, the latter qualities are encouraged. Photography's place in the hierarchy of visual representation held was encapsulated by Lady Elizabeth Eastlake, in her important essay "Photography" (1857). Its use was

> "...for all that requires mere manual correctness, and mere manual slavery, without any employment of the artistic feeling, she is the proper and therefore perfect medium. She is made for the present age, in which the desire for art resides in a small minority, but the craving, or rather necessity for cheap, prompt, and correct facts in the public at large...What are her unerring records in the service of mechanics, engineering, geology and natural history, but facts of the most sterling and stubborn kind?" [24]

An explicit connection between photography and industrialisation with regard to the way they impoverish appreciation of qualities seen as the prerogative of the fine arts was made by Baudelaire, who, in his essay "Photography" (1859), attacks overtly realist art:

> "Could you find an honest observer to declare that the invasion of photography and the great industrial madness of our times have no part at all in this deplorable result? Are we to

> suppose that a people whose eyes are growing used to considering the results of a material science as though they were products of the beautiful, will not in the course of time have singularly diminished its faculties of judging and feeling what are among the most ethereal and immaterial aspects of creation?" [25]

Looking today at Carey's series, the result of a "material science", we would find it hard to see it as an exercise in "manual correctness", devoid of "artistic feeling", yet broadly speaking, both Baudelaire and Eastlake summarise accurately the basic and presumed aim of photography, and industrial photography in particular. Ten years after the Bridge was finished an English photographer of medieval architecture, Frederick Evans, in an essay entitled Pure Photography" (1900), can be identified as one of the writers laying the theoretical groundwork for the way in which we appreciate Carey's photographs today. He writes. "Photography, in its art expression, may, I think, have almost its greatest value and success in architectural subjects...[It] is able to place on record far finer and more abundant detail than is possible to the draughtsman, and that without sacrificing any of the breadth of statement which must always characterise the true artist's work." [26]

In the context of these important ideas in nineteenth-century photography, it would seem that in no stylistic sense, one suspects, can Carey's photography be linked directly to contemporary photographic developments or debates on its role in relation to the visual arts. This is largely because as a young professional engineer Carey is extremely unlikely to be informed of current debate let alone allow it to influence the way in which he approached his job as official photographer. However,

the intellectual and artistic qualities of Carey's final product are clearly seen, especially in contemporary visual terms which less dogmatically separates different forms of visual practice. [27]

The Promotion of Functionalism and Carey's Photography

Messrs. Harrison, Barlow, Fowler and Baker, Engineers were employed as the consultant engineers for the construction of the Forth Rail Bridge. Benjamin Baker is chiefly given credit for the design of the Bridge whilst Fowler oversaw the construction of the approaches to the Bridge. [28] Additionally, Baker had an interest in the history of engineering, early bridge construction and in the restoration of earlier industrial structures, which he made explicit in various explanatory articles on the Forth Rail Bridge's design. In The Forth Bridge (1882) he points out that, "In principle, a continous girder bridge is as old a type of construction as an arch or suspension bridge..." [29] However, the scale of the Bridge and the ability of mild steel rather than iron to do a job of that size was, at that point, untried. (The earlier Eastern bridges which Baker used to illustrate the cantilever principle were constructed out of wood and not out of iron or steel.) The Bridge's dimensions had caused alarm before it was built: Sir George Biddell Airey published a warning that, "...we may reasonably expect the destruction of the Forth Bridge in a lighter gale than that which destroyed the Tay Bridge." [30]

Benjamin Baker had a firm commitment to the possibilities of engineering in steel. As Baxandall points out, Baker's design and

subsequent defence of the Bridge shows a kind of "expressive functionalism" in engineering [31] , where only the barest structural necessities are included. It has already been noted above that the aesthetics of the Bridge were most forceably attacked by William Morris in 1889 in the following terms: "There never will be an architecture in iron, every improvement in machinery being uglier and uglier, until they reach the supremest specimen of all ugliness - the Forth Bridge." [32] However, Baker had already defended himself eloquently a year earlier against accusations regarding the Bridge's aesthetic. In The Builder, he wrote

> "...in regard to the question of ugliness, it is a piece of unadorned and naked construction of a scientific stamp...The main lines of the construction you cannot alter, whether they are thought beautiful or otherwise...It would be difficult to imagine a more complete 'reductio ad absurdum' of the vanity of trying to be artistic by imitating something foreign to the material." [33]

In Industries, Baker is quoted as saying that, "If a workman is working in iron, he should insist upon and exhibit its strength and tenacity, and he will invariably find the material grateful." [34] This thesis of Baker's which is, in effect, a prototype for Functionalist and Modernist theories in our own century, determines that the Bridge looks the way it does due to a complex fusing of necessity, appropriateness and simplicity. [35]

The Role of Carey

Whilst the earlier part of this chapter discussed Carey's series in detail, this part looks at Carey's role in promoting Baker's ideas. As an engineer,

Carey would have certainly understood and likely sympathised with Baker's engineering aims described above. Whether from personal volition or not, Carey had a clear remit to articulate the beauty and soundness of Baker's intentions through his role as photographer. Indeed the alliance between engineering and aesthetics was a vital one for the promotion of the Bridge: it must have been clear to Carey that the higher the aesthetic achievement of the photography associated with the Bridge, the greater the prestige afforded Baker's work. In this way, Carey's photographs are, from the first, a special case in that throughout the history of industrial photography only rarely do photographers have a thorough and professional understanding of their photographed subject. [36]

The photographs in the series emphasise a forceful and unadorned aethetic which parallels in photography the expressive functionalism of the design itself. The role of photography in engineering, as well as other fields, as being an ostensibly transparent medium, able to communicate its subject unaltered to the viewer ideally suits the proclaimed functionalism of Baker. This ideal must be seen in contrast to earlier bridges of the nineteenth century, where engineers delighted in disguising the material used by contorting it in a manner contrary to its natural qualities. Such an example is found in Thomas Telford's Waterloo Bridge, Caernarvonshire (1815). Here details of thistles and roses were applied in metal as decoration over the construction. [37]

Carey is exploiting the ability of photography to record the intensive repetition of shape and line in order to convey the complexity of the Bridge's construction, with as much clarity as the photographic medium

allows. In a report of Baker's address to the Edinburgh Literary Institute the writer commented that the designers, "...made the compression members strong tubes, and the tension members light lattice work, so that to any intelligent eye the nature of the stresses and the sufficiency of the members of the structure to resist them were emphasised at all points." [38] With reference to Carey's photographs this is a significant statement in that it asserts that the visual aspect of the Bridge explains its function and if the eye is trained to understand what it sees the two types of girders (tubular to take forces of compression and L-sectioned to take forces of tension) will be recognised in the functions they are performing. The notion of transparency of function and the role of the camera in recording this transparency is vital to Carey's photography.

Transparency of function in the field of engineering would seem to imply an absence of style in an aesthetic sense, or at least the absence of an obvious stylistic precedent with regard to the appearance of the Bridge. It is this characteristic which impressed the supporters of the Bridge, for example, Alfred Waterhouse, architect of London's Natural History Museum, who said of it,

> "One feature especially delights me - the absence of all ornament. Any architectural detail borrowed from any style would have been out of place in such a work. As it is the bridge is a style unto itself: the simple directness of purpose with which it does its work is splendid and invests your vast monument with a kind of beauty of its own, differing though it does from all the beautiful things I have ever seen." [39]

The proposition that the Bridge was without stylistic precedent compares interestingly with a comment in Eastlake's essay "Photography",

where she says that the facts recorded by the camera are, "...facts which are neither the province of art nor of description, but of that new form of communication between man and man - neither letter, message, nor picture - which now happily fills up the space between them." [40] Eastlake's is a challenging and perceptive proposition, comparable to Waterhouse's comment on the Bridge, and one perhaps more sympathetically understood today, when hierarchies within visual communication have been heavily revised. In 1917, the American photographer Paul Strand was to comment on precisely this aspect of technology and photography, when discussing new movements in American photography over the period 1895-1910:

> "Everything [the photographers] wanted to say, had to be worked out by their own experiments: it was born of actual living. In the same way the creators of our skyscapers had to face the similar circumstances of no precedent, and it was through that very necessity of evolving a new form, both in architecture and photography that the resulting expression was vitalised." [41]

This passage is entirely appropriate to the photography of Carey and represents an even earlier example than that of the American: that photography, when executed with understanding, could exploit the originality of its subject's appearance in creating an original aesthetic of its own.

There was one predominant set of historical precedents which may have obliquely influenced the photography associated with the Forth Rail Bridge. This was in the way in which the appearance of the Bridge's structure can be likened to the medieval forms in cathedral architecture. Both acts of engineering required substantial organisational commitment;

many different jobs needed to be carried out efficiently. Both cathedral- and bridge-building were invested with enormous symbolic importance by the respective societies which built them. Significantly, a major tenet of nineteenth-century revivalism was the perception that Gothic architects designed cathedrals and churches maintaining truth-to-materials theory, making transparent the functions of architectural supports. One of the earliest nineteenth-century 'functionalist' analyses of medieval architecture was made in 1805 by John Robinson who had "'drawn attention to the truthfulness of Romanesque timber roofs' where the structural parts were 'exhibited as things understood and therefore relished.'" [42] This positivism expressed in the writings of Viollet-le-Duc (1814-1879), for example, *Dictionnaire raisonné de l'architecture française*, (1854-68) which held that the Gothic style was a secular reaction against the restrictions of the Middle Ages, is also clearly exhibited in Baker's design and, by extention, Carey's photography. In architecture and engineering this expressed itself in the form of rationalism and transparent functionalism. In this way, notions of functionalism in architecture, innovation in engineering and realism in aesthetics become strongly related. It is in this area which Carey's photography operates. The many steel supports which rise and fall diagonally within the Forth Rail Bridge's structure are, in John Robinson's phrase quoted above, to be "...exhibited as things understood," and it is this which Carey does, using photography as the most appropriate and 'direct' medium available to him. Strong links with medieval production also indicate connections with social collectivism as promoted by writers and artists around the Arts and Crafts Movement, and Scots such as Geddes, MacDiarmid, Finlay and Fergusson, all of which are discussed in Part One (see particularly the Conclusion to Part One).

As described thus, in reality the aesthetic of the Bridge bore visual relationships with other past and present structures. However, this aspect was not to the fore of discussion concerning the Bridge and it was its difference rather than similarity to other objects which caused most interest. This only serves to reinforce the freshness of the photographic enterprise. A young engineer, new to the discipline of photography was here attempting to articulate an ostensibly 'transparent' engineering structure with an ostensibly 'transparent' visual medium. [43]

Carey's "Photography in Compressed Air"

Carey's commitment to innovation in engineering was paralleled in his photography. There exists an article by him published in Industries, in 1888, entitled "Photography in Compressed Air. In the Air Chambers of the Caissons at the Forth Bridge" where he explains the difficulties of taking photographs in artificially-created conditions at the foundations of the caissons which were necessarily below water level. "The views obtained," he states, "though serving as records of the work carried out in the air chambers, have no pretentions to photographic excellence, definition and sharpness of outline being impossible to obtain in the peculiar atmosphere at which the plates were exposed." [44] Carey notes that a photographer W.D. Valentine accompanied him to offer advice based on experience gained in his own attempts at underwater shots of the ruined Tay Bridge. [45] The experiences of W.D. Valentine in attempting underwater photography had been published by the photographer six years before Carey's article, entitled "On Submarine Photography" [46] It would be highly surprising if Carey was unaware of such a relevant article. The interest in the

construction of the Forth Rail Bridge shown by W.D. Valentine as well as the commercial firms of James Valentine and George Washington Wilson is further evidence that it was a major focus of attention from the purely photographic point of view, due to both its scale and its national prestige. [47] Additionally the publication of these technically-advanced photographs brought particularly hazardous conditions of working life into the public domain for the first time.

Photography's firm link with engineering, first proposed by Alexander Gordon nearly half a century earlier, is decisively strengthened with Carey's series. The positive interpretation of reconstruction and the rejuvenating qualities of industrialisation, represented by the photography of the Forth Rail Bridge, certainly did not die out with such work. It continued into the twentieth century in Scotland, particularly with the work of Muirhead Bone. Bone, growing up in the reign of Victoria, spans the zenith of British industrialisation, which Carey represents, and the birth of Modernism proper. His scenes of construction and demolition work, and his war work continue some important aspects of Carey's complex and extensive achievement.

NOTES

Part Two, Chapter 1. Evelyn Carey and the Construction Photographs of the Forth Rail Bridge

1. Francis D. Klingender, Art and the Industrial Revolution, (1947), St. Albans: Paladin, (edited and revised by Arthur Elton), 1972, p.141

2. Alexander Gordon was born in New York of Scots parents who returned when he was still a child. Educated at Edinburgh University, he was subsequently employed by Thomas Telford and Robert Napier. His chief area of interest was in the design, construction and maintainance of lighthouses. [I.C.E. Minutes of Proceedings, Vol.30 (1870)]

3. I.C.E. Minutes of Proceedings, Session 12, May 1840, London: Institution of Civil Engineers, p.57

4. For example, ref. construction photographs of Robert Stephenson's Britannia tubular bridge, dated 1849, [New Civil Engineer, 20 August, 1987, p.40-2].

5. Unidentified newspaper cutting, n.p., Scottish Records Office, Edinburgh.

6. Ibid., n.p.

7. Michael Baxandall, Patterns of Intention. On the Historical Explanation of Pictures, New Haven and London: Yale University Press, 1985, p.40

8. In this it bears some relation to its contemporary, the Eiffel Tower, built in Paris specifically to celebrate the centennary of the French Revolution. Its central site in Paris has led to it being far more famous than the Forth Rail Bridge. However, in engineering terms, it was fabricated from iron, a more traditional material than steel. The bridge is over five times longer than the Eiffel Tower is high, almost seven times heavier and took around fourteen times longer to build. Furthermore, due to the Eiffel Tower's lack of any real purpose, other than its symbolic one, it did not find favour with Benjamin Baker who said of it, "It is a foolish piece of work, ugly and ill-proportioned, and of no real use to any one." [The Builder, 17 March, 1888, p.188] Looking at it from the perspective of the visual arts, one might speculate that if the Forth Rail Bridge had been less useful and more geographically central within a city it might have had the same popularity among artists that the Eiffel Tower has enjoyed.

9. An interesting episode relating to the Tay Bridge, illustrating a relationship between artistic and scientific creativity is given in L.T.C. Rolt's Great Engineers: Sir John Fowler, one of the consultant engineers for the Forth Rail Bridge, had suspected that the piers of the Tay Bridge were too narrow. "When he [Fowler] met James Nasmyth, the inventor of the steam hammer, at an exhibition of Holbein portraits on the day the news of the disaster reached London, Fowler declared that if Bouch had adopted for his piers the 'Holbein straddle' so evident in the famous portrait of Henry VIII, his bridge might still be standing." London: Bell Books, 1962, p.163-4

10. Walter E. Houghton, The Victorian Frame of Mind, 1830-1870, New Haven: Yale University Press, 1957, p.28

11. Biographical details are in Candidate Circular, Associate Members, 10/1/1888, Institute of Civil Engineers, London. A photogravure portrait of Carey exists in a series called "Forth Rail Portraits", issued by Industries, 28 February, 1890.

12. Industries, 23 March, 1888. The credit reads "...taken by Mr. E.G. Carey, Assoc. M. Inst. C.E.". Francis Pugh comments upon the rarity of crediting photographers of industrial subjects, with reference to two later Carey reproductions which appeared in the 2 August, 1889 issue of The Engineer [Francis Pugh / Peter Stebbing, Industrial Image. British Industrial Photography 1843-1986, London: Photographers Gallery, 1986, p.17].

13. Industries, 5 August, 1887, n.p.

14. Francis Pugh, Industrial Image, op. cit., p.17

15. See, for example, George Washington Wilson's Forth Bridge [7082], c.1887, Aberdeen University Archives.

16. 1889, Phot.1 (14-56) N.L.S.

17. Rob Powell Brunel's Kingdom. Photography and the making of history, Bristol: Watershed, 1985, p.35.

18. Patterns of Intention, op. cit., p.28

19. W. Westhofen, "The Forth Bridge", Engineering, 28 February, 1890, p.27. Westhofen continues, pointing out that although men were quick to act in cases of emergency, they were lax when using tools on the bridge and says, "If any charge can be brought against the workmen, or at any rate a large proportion of their number, it is that of utter indifference or carelessness with regard to danger of causing injuries or death to one another." Ibid. p.62

20. Poor living and working conditions, which became important subjects for photography, were in fact being explored previous to and contemporarily with Carey's series in, for example, Thomas Annan's extended series Old Closes and Streets of Glasgow (1860s-70s). Jacob A. Riis's How the Other Half Lives, (1890) exemplifies a socially concerned series by a professional photographer of conditions in the Lower East Side of New York. However, Carey in avoiding social documentation and adhering strictly to his remit, evades the disapprobation levelled at Riis and others by Susan Sontag in On Photography, who says "Photography conceived as social documentation was an instrument of that essentially middle-class attitude, both zealous and merely tolerant, both curious and indifferent, called humanism - which found slums the most enthralling of decors." Harmondsworth: Penguin, (1977), 1979, p.56

21. W. Westhofen, op. cit., p.7

22. Quoted in Sheila Mackay and Nic Allen, Bridge Across the Century. The Story of the Forth Bridge, Edinburgh: Moubray House, 1985, pp.13 & 16

23. Cited in Photography: Essays and Images. Illustrated Readings in the History of Photography, (Beaumont Newhall, ed.), New York: Secker and Warburg, 1981, p.79

24. Reprinted in Newhall, ibid., p.93-4

25. Reprinted in Newhall, ibid., p.113

26. Cited in Newhall, ibid., p.177

27. Considering the achievement represented by Carey's series of the Forth Rail Bridge, his subsequent photographic work is of interest, and requires further research. After 1890, Carey became an employee of William Arrol, who was a major contractor and leading figure in the building of the Bridge, working at the Dalmarnock Ironworks, Bridgeton, Glasgow.

Two possible sites where photographs by Carey may have been executed are the Manchester Ship Canal, for which Arrol & Co. supplied material [Local Industries of Glasgow and the West of Scotland, (Angus McLean, ed.), Glasgow: Local Committee for the Meeting of the British Association for the Advancement of Science, 1901. p.72] and the Caledonian Railway over the Clyde. The first supposition is based on Carey's obituary published in The Evening Times, Glasgow, which is quoted in its entirety here: "Death of an Uddingston Engineer. Mr. Evelyn George Carey, A.M.I.C.E., dies at his residence, 38 Kyle Park Crescent, Uddingston yesterday morning, after a brief illness. Mr. Carey, who was unmarried, was 76 years of age and the eldest son of the late Rev. Alfred Henry Carey, of Abington, Northampton, and Guernsey. He was of a retiring disposition, and took no part in public affairs. He was an associate of the Mining Institute of Civil Engineers, and as an inspecting engineer nad [sic] many important engagements, acting as chief inspecting engineer under William Arrol and Co. during the construction of the Forth Bridge, and afterwards superintended the erection of the bridges connected with the Manchester Ship Canal. He fulfilled many engagements in connection with the corporations and municipalities during recent years." [Saturday, 1 October, 1932].

In this obituary his photographic enterprises are not mentioned, but this does not rule out the possiblility that he had responsibility within Arrol's for making photographic records of their contracts. This is likely, given the acclaim in the engineering journals for his photographic work on the Forth Rail Bridge.

A set of photographic volumes recording the construction of the Caledonian Railway over the Clyde does exist. This was built by Arrol & Co. between August 1901 and September 1904. [Strathclyde Regional Archives TD 208/28/3] Contained in this volume are around eighty high quality, precisely dated photographs. In this, they bear comparison to Carey's work on the Forth Rail Bridge. Two photographs, one dated 16 June, 1902, the other 31 March, 1903, show stacked compositions, with workers shown on two different levels, bearing comparison with some of the Forth Rail Bridge images. Two photographs [one dated September, 1902, the other undated, on

opposite page] are taken with an aesthetic concern uppermost, rather than for a purely documentational record. They are both concerned with the reflection of light from girders, the second one including workmen in the background. A final photograph of 27 October, 1903, shows men working beneath the bridge floor using a particular piece of equipment in very cramped conditions. One could compare this type of photograph to the ones taken in compressed air under the Forth Rail Bridge caissons, where the photographer has taken pains to show the conditions of the workmen in using a specialised piece of equipment, or the photograph No.270 The Forth Bridge. Riveting top of strut 1 Queensferry NW. June 18th 1884 which records men on top of a strut, during the process of rivetting. Their attention to compositional qualities and their joining of the concerns of both documentational and aesthetic photography places them closely in relation to the photographs of the Forth Rail Bridge. The likelihood that these photographs are by Carey, although only tentatively forwarded here, must remain a distinct possibility.

28. Patterns of Intention, op. cit., p.17

29. B. Baker, The Forth Bridge, London, 1888, p.35. See also the illustration of a Tibetan bridge, 1783, based on the cantilever principle, in W. Westhofen The Forth Bridge, London, 1890, which also served to demonstrate the historical precedence of such a cantilever design.

30. Nature, 19 October, 1882, n.p.

31. Patterns of Intention, op. cit., p.24

32. Transactions of the N.A.A.A.A.I., London: T&A Constable / Edinburgh: Edinburgh University Press, 1890, p.332

33. The Builder, 17 March, 1888, p.188

34. Industries, 28 February, 1890, p.205

35. His thesis is also close to one aspect of the Arts and Crafts Movement's belief in the benefits of truth to materials and economy of expression (see Part One, Chapter 1, particularly the account of the N.A.A.A.A.I conference, 1889.)

36. It should be noted that the contemporaneous construction of the new Tay Bridge, 1882 - 1887, was also photographed by an Assistant Resident Engineer, Francis Crawford Caffin, M.I.C.E., 1857-1920. [Ref. J.S. Shipway, The Tay Railway Bridge, 1887-1987, Institution of Civil Engineers, 1987] He, like Carey, was still in his twenties when employed as photographer in addition to his engineering duties. The images he produced, for example, Floating out a central span and Lifting a central span [Ibid., p.23 and p.25] show the same attention to composition and desire for clarity as Carey's series, and were complimented in Crawford Barlow's New Tay Bridge, 1888, who acknowledges Caffin "...for a very valuable series of photographs taken during the progress of the works."

37. Cited in A. Scharf, Art and Photography (1968), Harmondsworth: Penguin, 1971, p.16

38. Cited in Baxandall, op. cit., p.25

39. Quoted in Mackay and Allen, op. cit., p.28

40. In Newhall, op. cit., p.94

41. "Photography", in Newhall, op. cit., p.220

42. Cited by Peter Collins, in Linda Nochlin Realism, Harmondsworth: Penguin, 1971, p.222

43. From our own contemporary perspective, when the battles of Modernism and Functionalism have been won and superceded, it is easier to appreciate Baker's position and positive virtues, as evidenced in the following passage in William Hardie's Scottish Painting, 1837-1939: "The achievements of Victorian engineering might have suggested that engineers, and perhaps painters too, are more likely to create at a high aesthetic level when they submit to the physical discipline imposed by their materials rather than when they endeavor, self-consciously to realise a concept of beauty. The best Victorian and Edwardian Scottish painting has a certain plastic emphasis which parallels the approach of those engaged on the other side of the cultural divide." [London: Studio Vista, 1976, p.16]

44. Industries, 20 April, 1888, p.400

45. Ibid., p.400

46. Photographic News, 19 May, 1882, n.p.

47. Many publications giving accounts of the history of the Bridge have been published, many using popular illustrations and documentational material associated with the Bridge, for example, Anthony Murray, The Forth Railway Bridge. A Celebration, Edinburgh: Mainstream Publishing, 1983 and Sheila Mackay, The Forth Bridge. A Picture History, Edinburgh: Moubray House, 1990.

PART TWO, Chapter 2

MUIRHEAD BONE

Introduction

Muirhead Bone (1876-1953) was one of the most prominent exponents of etching and drypoint in Britain in the first half of this century. Before the First World War, he had established a reputation unequalled in the medium. [1] His two most prominent contributions to printmaking are his establishment of construction and demolition scenes as a serious artistic genre, almost in their own right, and his position as the first official war artist in Britain, during which time he produced series both on the Home and Western Fronts, including shipbuilding and munitions work subjects. In his early career, he worked in Scotland and thereafter more sporadically, basing himself for the most part in London and Oxford.

His imaginative interpretation of scaffolding and building sites brought him much acclaim over the first decades of the century. His distinguished position in relation to previous printmakers is evidenced by a passage from J. Laver's The History of British and American Etching (1929), where the author writes:

> "Whistler, in his later manner at least, was a true Impressionist in that he was more interested in light and atmosphere than in the form of things. Meryon loved buildings for their own sake, but even he was concerned essentially with a *façade*. Muirhead Bone has an interest in *structure* which makes him an important influence in the etched work of the twentieth century. For the

twentieth century is obsessed by structure; it is an Age of Machinery, and machinery is nothing but bones without flesh." [2]

Laver's observation illustrates well the potential for seeing Bone in a Modernist context, although with the change in fashions, Bone is not usually placed so centrally in the development of twentieth-century Modernism. In his belief that the twentieth century is "an Age of Machinery", it seems likely that the author of the above passage is deliberately citing Thomas Carlyle, who also wrote of the nineteenth century that "It is the Age of Machinery, in every outward and inward sense of that word...Our old modes of exertion are all discredited, and thrown aside." [3] The sense of endless renewal in the nineteenth century was certainly being criticised by Carlyle, but Bone, although giving tangible illustration to this type of renewal in his construction, demolition and shipbuilding works, does so in a broadly positive spirit, as will be seen below. This was in part based on the utopian ideals held in the Victorian Age, to which he was born, whilst also looks forward towards a new age of change and reconstruction that can be located in the twentieth century.

Over his career, Bone made coherent and pertinent statements on the urban and industrial environments within which he worked. It is proposed to analyse them now, before turning to the images themselves.

As early as 1901 Bone had communicated his interest in 'low' art subjects. In a letter to D.S. MacColl he suggests that, "The poorest back

court is after all a serious thing to somebody..." [4] In 1929, he recalled Glasgow, making a number of crucial points. His predecessors, "The Glasgow School did not paint Glasgow," [5] and that "...the obviously picturesque, the pretty, was not very easy to find in the Glasgow of my youth...a good thing." [6] Bone refers to the docks as "wonderfullest domain!" [7] By 1937 Bone had grown more whimsical but no less positive about the importance of industrial and urban subject-matter:

> "Did we elder Scottish artists not play for safety too much (on choice of subjects and the like)? Perhaps we did not make a strong enough effort to wrest an art of our very own from conditions of life as it was lived around us - doubtless we left too much of the field unoccupied. In the future, no doubt, there will be a great enterprise in subject-matter...But it is not the strange in subject-matter which keeps the attention in the end - it is the freshness with which ordinary subject-matter is observed...Glasgow's tenement life - Glasgow's working life, is a superb feast for any artist...the Broomielaw, the shipyards, our old Clyde steamers, the nocturnal city, the melancholy flats of Garngadhill...I bless the Academy I found in the Glasgow streets. The grand indifference of the great city taught one concentration and gave one solitude..." [8]

The use of words like 'nocturnal' and 'melancholy' indicate the vestiges of an approach to the city which owes much to Whistler (Bone's debt to whom is examined below), yet equally significant seems to be the phrase, "the grand indifference of the great city," echoing the enthusiasms of Baudelaire, for example, in his Salon review of 1846, "On the Heroism of Modern Life", where he asserts that "The life of our city is rich in poetic and marvellous subjects. We are enveloped and steeped as though in an atmosphere of the marvellous; but we do not notice it." [9] Bone's professed commitment to an art of ordinary life and work, where the everyday becomes a fruitful subject for art is an expression of allegiance to the ideals laid down in Baudelaire's The Painter of Modern Life (1863). Bone implies

that Glasgow is in some senses a Scottish artist's equivalent to Paris, as an inspiration for depictions of modern life. [10] In "From Glasgow to London" he cites both the printmaker Charles Meryon's Views of Paris and Degas' drawings of Paris life as early influences. [11] In emphasising this connection Bone invites links to be made between his own art and early Modernist French art and thought. [12]

Charles Meryon is one of the more obvious inspirations for Bone. Baudelaire, in his Salon Review of 1859 (part XIII), laments the absence of, "...the landscape of great cities by which I mean that collection of grandeurs and beauties which results from a powerful agglomeration of men and monuments - the profound and complex charm of a capital city which has grown old and aged in the glories and tribulations of life." [13] He says of Meryon:

> "I have rarely seen the natural solemnity of an emmense city more poetically reproduced. Those majestic accumulations of stone; those spires 'whose fingers point to heaven'; those obelisks of industry, spewing forth their conglomerations of smoke against the firmament; those prodigies of scaffolding round buildings under repair, applying their openwork architecture, so paradoxically beautiful, upon architecture's solid body...those limitless perspectives, only increased by the thought of all the drama they contain - he forgot not one of the complex elements which go to make up the painful and glorious décor of civilisation." [14]

Baudelaire laments the "mysterious madness" which ended Meryon's career, [15] however we should note that Baudelaire here exhibits little of the pessimism we feel in Meryon's work. Rather he reflects a sense of wonder and awe at the products of the city and industrialisation which might be said to anticipate the work of Bone rather than explain the work

of Meryon. (Baudelaire's passage, quoted above, in its positive and aestheticising promotion of industry and modernity in art, was an important precedent for the theories of Marinetti, Futurism and Vorticism. Bone was to have oblique associations with these movements discussed below.)

As described in his essay "From Glasgow to London", Bone may well have been inspired to undertake industrial and urban subjects by his early experiences accompanying his father, a journalist, around Glasgow. [16] The topographical and social awareness gained by the young Bone provided a foundation for his future work, and promoted a documentational perspective in his approach to the city. The relationship between printmaking as topographical and contemporary, and the uses of photography as a documentational tool enable us to link Bone's intentions to those of Carey, discussed in Part Two, Chapter 1. Bone's connection with photographic practices are established by two minor examples, firstly in the etching In Camera (1901) (also called The Bromide Printer) which shows a photographer's studio, and, secondly, the fact that the source for a 1903 London scene, Watkin's Airing Yard has been identified as the following: "It was partly suggested by a woodcut in a book entitled 'The Great World of London', which contains many illustrations of prisons from photographs by Herbert Watkin (hence the title)." [17] This example does suggest that Bone had been looking closely at photographic practice within the city and consequently it is unsurprising that a photographic aesthetic informs his own work.

Whilst by the late 1920s, Bone's greatest period was behind him, through his writings of 1929 and 1937 he shows himself in sympathy with other writers promoting modernisation and industry in the context of cultural expression. A strong connection exists between Bone's texts quoted above and a 1930 review which appeared in The Modern Scot, an important publication on Scottish cultural affairs promoted by Hugh MacDiarmid (see Part One, Chapter 4). Written by W. Scott Harrison, "The R.S.A., 1930" was ostensibly a review of the annual exhibition held in Edinburgh but the author undertook a theme so close to Bone's passage as to indicate that Bone's text may have had some impact. Extensive citation of Harrison's article is required to make the point clear:

> "If Scottish art is to renew its vitality, if a definitely National school is to emerge, it must be done not only by treating old subjects in a new way, but by the finding of new subjects, treated in any particular way that meets the case...Is there nothing in Scotland save the lochs and the bens and the old cottages? Who, save perhaps one man, has yet dealt adequately with the wonder and the glory of Edinburgh? And must we always seek beauty in crumbling walls? Man is doing wonderful things with steel and concrete, he is flinging great spires to the sky, and his work has a beauty which need not wait for the mellowing hand of time, but only for the vision of the artist.
>
> Is there any great beauty in the tracery of branches against the sky than in the tracery of the great derricks against the steam-laced smoke of Clydeside, or anything in Nature more majestic than the vast shapes, lit with crimson and orange, of the steelworks of Lanarkshire?
>
> We are men of our time, and art, if it is to be living art, must, to some extent, reflect the life of its time...Who will render for us the jolly colour, the glaring warmth, and the happy bustle of a motorbus stance at night...?" [18]

This passage, promoting industrial subjects as opposed to natural, highlights a central theme of Futurism apparent twenty years earlier and

has recurred often as a complaint by cultural commentators. It also inherits the fundamentally Romantic attitude of the Futurists towards industry, rather than its functional and constructive aspects. Yet Bone's article "From Glasgow to London" laments the lack of these subjects. His 1937 article even more closely evokes Harrison's strongly visual response to the urban and industrial presence. The link, through a comparison between Bone's writing and Harrison's contribution to The Modern Scot, is the closest available to connecting directly Bone's urban and industrial interests with those of Hugh MacDiarmid, who otherwise seems to have little directly in common with the printmaker.

The Yellow Book

Constantin Guys, Baudelaire's great exemplar in the visual arts, and subject of The Painter of Modern Life, published an illustration in The Yellow Book. An Illustrated Quarterly in 1895. [19] The Yellow Book consisted of thirteen volumes of prose, articles and illustrations which appeared between April 1894 and April 1897. Although all of Bone's strongest work was to follow, two of his first published images were included in the final volume of The Yellow Book (Vol. XIII, April, 1897): Winter Evening on the Clyde **[Fig. 9]** and Old Houses off the Dry Gate, Glasgow.

Winter Evening on the Clyde is a heavily-worked image which emphasises the smokey and oppressive atmosphere of industrial Clydeside. The activity of an industrial city is indirectly indicated by factory chimneys rather than by directly showing people at work. It is an

unflattering evocation of a major city still at its height. It compares closely with the poetry of John Davidson, for example, "Greenock" written only three years before, in 1894, a passage of which reads:

> *.....this grey town*
> *That pipes the morning up before the lark*
> *With shreiking steam, and from a hundred stalks*
> *Lacquers the sooty sky; where hammers clang*
> *On iron hulls, and cranes in harbours creak,*
> *Rattle and swing, whole cargoes on their necks...* [20]

Old Houses off the Dry Gate, Glasgow is lighter, less gloomy and depicts inner-city architecture; a sunny courtyard where women hang out washing. Bone's intention is to set up a contrast between citizens at work and the urban environment which dominates them in scale.

Muirhead Bone was not the first Scottish artist to appear in The Yellow Book, nor even the first to depict industrial subject matter. The entire artistic input of Volume VIII, January 1896 consisted of the work of the Glasgow School, including D.Y. Cameron, John Lavery, E. Hornel, J. Crawhall and E.A. Walton. It also reproduced two ostensibly industrial paintings: The Old Mill by R.M. Stevenson and The Forge by Grovesnor Thomas, both though executed in a picturesque manner.

Two important early etchings, The Dry Dock (1899) **[Fig. 10]** and Shipbuilders, Whiteinch (1899) **[Fig. 11]** reward detailed study. The Dry Dock is an etching and drypoint which shows an industry at the very heart of Glasgow's economic standing at the time. It depicts Robert Napier's

repair dock (identified by the sign above the whole scene, part of which reads 'Painting and Repairing'). The two ships are the 'Nebraska' and the 'Calston'. Huge wooden beams, which hold the ships in position, form a dramatic sweep across the composition and this immediate, striking quality gives it an aesthetic close to photography. It is the kind of scene he may have often witnessed accompanying his father around Glasgow, and was situated close to his home area of Partick. The composition is a reversal of the true scene, as the drawing Study for The Dry Dock **[Fig. 12]**, presumably done on the spot, illustrates. [21] Both the drawing and the drypoint emphasise the contrast in technology between the wooden fishing boats in the foreground and the adjacent 'Nebraska' and 'Calston'. The contrast between physically-propelled and mechanically-propelled vessels is depicted here.

Shipbuilders, Whiteinch is a lively and positive depiction of organised labour. A heightened sense of community and communal effort towards the ultimate goal is the underlying effect of the print. Significantly, in making the ship closely resemble a church or cathedral structure, Bone imbues the scene with historicising allusions to medieval construction with its emphasis on mass labour and monumentality. Bone is optimistic, interpreting the constructions of industry in a politically positive context. From a social perspective, his transparent optimism in his industrial subjects lent a neutrality regarding the position of the worker in industry. (Such absence of any immediate polemic was to have a great bearing on the manner in which his art was treated in the First World War, by his commission as war artist, as will be demonstrated below.) Bone's commitment was primarily to the industrial environment as a source

for dramatic visual stimuli, from which he drew out ideas on how society relates to the urge towards modernisation. It was not an art of specifically political commitment.

The Influence of Whistler

An important influence which links Bone directly to the tradition of French realism can be firmly established through his intense early interest in the etching of James MacNeill Whistler, (an artist who already had been strongly supported by Glasgow patrons.)

Whistler executed a number of urban and industrial scenes of Paris and London, occasionally showing the influence of Meryon, in, for example, the etching *Isle de la Cité, Paris* (1859), which is comparable to Meryon's *L'Abside de Notre-Dame, Paris* (1854) in its topographical depiction of city architecture and city life. The chief object which commands our attention in Whistler's etching is the iron bridge spanning the Seine. The linearity of its depiction shows a desire to explain clearly its structure even at the expense of the overall picturesqueness of the scene. This emphasis on a clearly explained engineering structure positioned in the foreground is also shown in Meryon's *La Pompe Notre-Dame*, executed a year earlier, in 1858.

Whistler's Thames Set (1858-9), was exhibited in Paris in 1862 and received praise from Baudelaire who applauded its "wonderful tangles of rigging, yardarms and rope; farragos of fog, furnaces and corkscrews of smoke; the profound and intricate poetry of a vast capital." [22] The

etchings for The Thames Set generally have a high regard for detail, for example, Black Lion Wharf, or The Pool, where the contents of the boats, the rigging and names on buildings surrounding the wharf are clearly discernable.

Whistler's Thames Set was produced after the artist actively sought out suitable scenes along the Embankment.[23] This series can therefore be seen as a conscious record of working life on the Thames before a civic programme of shoring up, clearance and reconstruction took place, destroying much of what Whistler depicts here. Whistler's researches are comparable to Dickens' visits to the same area as a preliminary to the writing of Our Mutual Friend (1864-5). Both Our Mutual Friend and The Thames Set record a particular urban environment at a critical time when its layout and its visual appearance was changing irreversibly. The documentational aspect of Whistler's work was important for Bone, especially with regard to his etchings of Edwardian London, when so much demolition work was undertaken (discussed below).

Whistler as an individual was not of the class which he strives to depict, hence his necessary excursions into the London docklands for material. The seeking out of such material was a natural process for Bone. Although Bone was not from the poorest strata of society in Glasgow, neither was his family exceptionally rich. His birthplace, Partick, is a residential district which serviced the nearby shipyards on the Clyde, thus his confrontation with all aspects of city life was a natural part of his upbringing. As has been indicated above, in Bone's words: "...the Glasgow of my childhood was no bad nursery for an artist. My father was

a newspaper reporter, and I was lucky in being able to wander in his company through a wide variety of scenes." [24]

It is possible to clarify Bone's development in his treatment of industrial subjects by opposing it directly with Whistler. Whistler, after The Thames Set, moved further towards his characteristic concern with atmosphere and light. Bone's earlier work clearly picks up on the scrappy impressionism of Whistler's later style. In drypoints such as Shipsmiths, Finnieston (1900) **[Fig. 13]**, or Denny's Old Workshop, Dumbarton (1900) **[Fig. 14]**, Bone's model seems to be Whistler's The Forge (1861). As Dodgson has pointed out, "By The Forge we moderns cannot help, again, being reminded of Muirhead Bone, and in this case it is not so unlikely that the masterpiece of 1861 inspired, forty years later, the younger master of dry-point in some of his fine interiors of workshops on the Clyde." [25] Bone's Shipsmiths, Finnieston, like The Forge, explores the effects of internal light from the forges on the interior scene and the men who work there. Figure and architectural detail is relegated in the interest of suggesting claustrophobia and discomfort associated with the job of smithing. The subject of smithing has been an abiding one in art, therefore Bone may have looked elsewhere for inspiration, such as Alfred Sisley's The Forge at Marley-le-Roi (1875), as the Impressionists approached industrial subjects with comparable fervour and feeling for atmosphere.

However, these are early works by Bone and show their influences clearly. Bone, at a later date, seems to reject this type of approach and seeks to distance himself somewhat from Whistler when criticising current picturesque landscape painting with the scene "...dissolved in the

fashionable Whistlerian fog." [26] In the same article he cites an antipathy to the picturesque as being rooted to his upbringing: "...the obviously picturesque, the pretty, was not very easy to find in the Glasgow of my youth- or since; a good thing." [27] Although we cannot rule out the possibility that Bone might wish to distance himself artificially from an important early influence in Whistler and also that he may see some credibility to be gained from reminding his readers of his lowly early environment, he is making a serious point with regard to a rejection of the predominance of style as an issue in his work. This rejection may perhaps be due, in part, to the fact that Bone learnt the technique of etching after his training at the Glasgow School of Art, consequently his use of etching tends to be more straightforward, relying on fewer artistic precedents, whilst relating more closely to the tradition of topographical art.

Bone did not leave Glasgow for good when he left in 1901, returning often to undertake major images of industrialisation and the urban environment in his home city. The most significant evidence of this is his publication Muirhead Bone. Glasgow. Fifty Drawings (1911). [28] It is an important and unusual book in that it represents a panoramic depiction of all parts of the city, including both picturesque and unsightly locations. As an artistic document, it is rare in a fine art tradition for its comprehensiveness, but is comparable to Thomas Annan's photographic studies of Glasgow, for example, Old Closes and Streets of Glasgow (1871). Industrial subjects executed by Bone for Fifty Drawings are numerous, including Queen Street Station, Glasgow (Ill.5) **[Fig. 15]**; The Barony Church, Castle Street, and Provand's Lordship (Ill.9) which shows a trench cut

across the foreground; North Wall of the Duke Street Prison (Ill.10) **[Fig. 16]** which shows workers on a scaffold hidden in the shadow cast by the prison wall; St. Rollox (Ill.13) **[Fig. 17]**, once the largest chemical works in Europe, is depicted in a sparse gloomy manner, showing a slag heap with chimneys in the background; Demolition of Old Sugar Exchange (Ill.21) **[Fig. 18]** with workers occupying the foreground with a historicising reference to the church in the background; Stockwell Bridge, and the Gorbals (Ill.27) another oppressive subject, with chimneys and cranes underneath a dark sky; Glasgow University from Cessnock Dock (Ill.30) **[Fig. 19]** perhaps a wry contrast between the delicate spire signifying the academic life as seen from the south-side dock in the foreground; The Smith's Shop, Fairfield Shipyard (Ill.34) **[Fig. 20]** interior scene with light filling the shop, stylistically closer to his lithographs of the same shipyard during the First World War. The inclusion into this series of working environments and poor estates, for example, The Smith's Shop and Stockwell Bridge and the Gorbals, shows an inclination towards representing this industrial city in a direct fashion, depicting its picturesque locations alongside its more dirty work places. This is re-iterated by Charteris's text which devotes whole passages to criticising Edinburgh and its reputation.

Glasgow. Fifty Drawings is a major and powerful documentation of a city, demonstrating that Bone maintained a serious commitment to industrial subjects in Glasgow despite his move to London. This body of work would also seem to represent, in a wider context, an ambitious visualisation of one city related to the civic ideals of Patrick Geddes. A close parallel can be found in Geddes' 1905 paper entitled "Civics. As Concrete and Applied Sociology". Geddes there posed a number of problems:

"The processes of our industries, in what is now their daily artisan routine, include, repeat, condense, what were yesterday or longer ago living inventions, each instinct with Promethean fire...How, then, shall we correlate this process of all things growing old with the analysis of cities above attempted? In other words, how shall we interpret the course of their historic evolution, their renewed growth and decay, progress and degeneracy, their present condition, crowded with residues of the past, with those potentialities which our outline discloses?" [29]

Central issues for Geddes concerning regrowth, change and the co-existence of old and new are shared in Bone's graphic work of Glasgow and London, which was undertaken at the very time Geddes was propagating his views above in London. The following section now looks at those themes of demolition and reconstruction in Bone's London images.

CONSTRUCTION AND DEMOLITION IN EDWARDIAN LONDON

Bone's first visit to London was as a twenty-one year old, going on a brief trip with his father in 1897. He soon returned to London as an independent artist in early summer, 1899, having just completed his first attempt in Scotland at a commercial edition in Six Glasgow Etchings (1899) which included The Dry Dock and Shipbuilders, Whiteinch. Bone moved to London in the autumn of 1901, prompted primarily by commercial necessity. In 1937 he recalled the move from Glasgow, somewhat apologetically, thus - "I can at least plead that I had tried my best to earn a living in my native Glasgow, and it was only when my prospects seemed very dark indeed that I packed a large "kist" with my unsold works and left for London." [30]

When in London he was introduced to fellow Scots such as D.S. MacColl, supporter of the New English Art Club and later Director of the Tate Gallery. MacColl may well have been an important influence on the artistic attitudes developed by Bone, indicated by a significant body of correspondence from Bone to MacColl which exists (deposited in Glasgow University Archives). His future opposition to Roger Fry's Post-Impressionist movement in England, as described by Charles Harrison, tells us that he reacted against what he perceived as the increasingly subjective in art:

> "'Personal feeling, then,' MacColl concluded, 'is the note of the movement, and the "Post-Impressionists" therefore are not classic at all, but extreme Romantics.' MacColl's response was typical of those critics of the [1912 Post-Impressionist] exhibition who felt that much which they held still to be of value was in danger of being supplanted as the result of an Unjustifiable and Fruitless Pursuit of Personal Freedom. In

> reaction against the sentimentality and laxity of much 'imaginative' painting in the later nineteenth century, men like Sickert and MacColl were accustomed to view with some scepticism any notion of art based upon a belief in the priority of the imagination and the sacrosanctity of temperament...Sickert, MacColl and their more enlightened contemporaries admired the direct and ordered statement of an uncontrived, but not unsophisticated, relationship between painter and subject...They could not accept a view of painting as essentially the expression of temperament." [31]

This antipathy to personal expression and temperament in preference for a "direct and ordered statement" is an essential element in Bone's work and the sympathetic and supportive response which must have come from MacColl may well have influenced or confirmed Bone's approach.

Bone records his immediate reason for his move to London in 1901 in order to undertake a commission to etch a building under construction there. [32] Charles Holden (1875-1960), introduced to Bone by Francis Dodd, provided lodgings for Bone at his own residence in London. Holden, who had worked for a time under the Arts and Crafts architect C.R. Ashbee, was then in partnership with architect Percy Adams, whose practice, Adams, Holden and Pearson, specialised in hospitals, and had given Bone the commission. The subject of construction, allied with the associated subject of demolition, was to become his tour-de-force in etching. The opportunities in London to depict industrial subjects which led on from his Glasgow body of work, for example Mitchell Street, Glasgow (1898) were readily available as the capital embarked on a major programme of renewal during the Edwardian era. In December of 1901, whilst staying with Holden, Bone wrote to MacColl having clearly identified potential subjects during this period of renewal: "...I am fixed quite in my mind now that I stay on

in London for over a year at least...The more I go about the more I see that London is now entering a period of shoreing and underpinning, and I feel that I have come to town at the right moment - I feel quite excited at the imposing lists of subjects I am prospecting aleady!" [33]

Bone's links with the architecture community was strong from the beginning of his career. When still in Glasgow he had written to MacColl with a view to contributing drawings to the Architectural Review, saying: "I have practiced pretty hard at drawing things and I would cheerfully enter into competition with the Piranesi's you reproduced in the last number, (and earned the gratitude of every draughtsman for doing so.)" [34] Further correspondence to MacColl shows Bone's enthusiasm for architectural work: "There is a church building near me and the scaffolding round the spire is a marvel of intricate beauty - a perfect joy to the discerning man in the street." [35] Bone continues, on the subject of another work sent to MacColl for his interest,

> "...The other thing is a very old drawing of a scaffolding - I thought it might touch the architects, there are so many straight lines in it - It's not my idea of drawing now though. Drawing should be sudden and vivid and should look as though it were "all there" at once - not built up of bit-to-bit proceedings as most drawings are." [36]

Here, although Bone is eager to contribute to Architectural Review, he still distinguishes his type of drawing from that of an architect, being more spontaneous and less rigid in execution.

Bone's etchings of architecture, as art, are deeply concerned with creating some sense of atmosphere, yet are also detailed and ordered to a

remarkable degree, however unlike architecture drawings they may be. The extent to which they explain in visual terms the precise nature of, for example, the process of demolition or construction whilst maintaining a sense of drama, is their most individual quality. This analytical aspect to Bone's urban industrial scenes partly comes from his contact with architects, such as Holden, and architectural journals, editors and critics such as MacColl.

It is not certain how long Bone's direct contact with Architectural Review lasted but assuming he remained familiar with it up to 1905 we might speculate that he knew the following pertinent, though anonymous contribution, cited in Rayner Banham's Theory and Design in the First Machine Age. It addresses some of the issues raised in Bone's art. In it, the author asked,

> "Why should we architects live in perpetual rebellion with the present?...The scientists have been truer to their generation. The impressive dignity, the beauty, the perfect fitness and the style of a modern express locomotive is incomparably finer than the best work of the best architect of today.
>
> If only we could build with the same fitness, the same science, the same *unchallenged acceptance of modern material and modern conditions*, and the same sincerity; if we could only think of our buildings as an entirely modern problem without precedent...just as the railway engine is, then, without doubt the same beauty, the same serene dignity would inevitably accompany our efforts, and the ruins of the past might crumble to dust but the architectural tradition would remain with us still. We must begin at the foundation and not at the cornice. We must put aboriginal constructive force into our work...We are ashamed of our nakedness - and yet it is in the confession of our nakedness that our regeneration lies." [37]

This passage's confident tone with reference to modern life in the city as expressed through its architecture, its concern with materials, the

reference to "ruins" and particularly its call to return to fundamentals, construction, "regeneration" and "nakedness" in architecture seem strikingly close to the concerns of Bone's graphic work. This may have been engendered through contact by Bone with Holden and fellow architects. Bone's early interest in municipal buildings such as prisons and hospitals also show his compatible interests to those of Holden's associates. Equally possible is that Bone shared Patrick Geddes' interest in urban development and renewal as expressed through promotion of municipal buildings.

The passage quoted above also is evidence of functionalist theorising in architecture, and the enthusiasm expressed for "the perfect fitness" of a locomotive above contemporary architectural production re-interates the positivist statements made by R.R. Anderson at the N.A.A.A.A.I. congress in Edinburgh, 1889 (see Part One, Chapter 1). The connections between this debate, the art of Bone and subsequent developments in functionalism, picked up by William Johnstone (see Part One, Chapter 5) show the strong shared interests in the tenets of functionalism held among the group of Scottish artists under discussion here across the turn the century and beyond.

The drypoint Building (1904) **[Fig. 21]** depicts a corner site clad, and almost completely concealed in wooden scaffolding. This image was referred to in Laver's History of British and American Etching as "a perfect orgy" [36] and shows Bone's ability at controlling detail and precision without losing the overall strength of design and composition. A pencil sketch exists for this work called Study for Building (c.1904) **[Fig.**

221 where there is little attention to detail, with only the general characteristics of light and shade indicated, as is the presence of workers and carts. In the index at the British Museum, this small work is catalogued under the title Stones of London. Bond Street. The origins of this title are unclear and may not be the artist's choice. However, apart from identifying it as a central London scene (as opposed to the more general final title), it also alludes to Ruskin's The Stones of Venice indicating (if this title is indeed by Bone) that he wished to record the dynamic urban scene in London, with all its intricacies and beauty, in a similar manner to Ruskin's work in Venice. A more tentative connection can be seen in the pointed scaffold arches which run along the ground floor in Building, resembling the Doges Palace in Venice, although here updated.

Bone extends a modest but distinguished Scottish tradition dating back to the eighteenth and nineteenth centuries, which had produced two major works concerned with the connected themes of construction and demolition. Firstly, John Runciman's etching The Taking down of the Netherbow Port (1764) and, secondly, Alexander Nasmyth's oil painting Princes Street with the Royal Institution Building under Construction (1825). Runciman's etching shows the initial stages of the demolition of Edinburgh's eastern gate to ease traffic congestion along the Royal Mile. It remained a very popular print and therefore was almost certainly known by Bone. Nasmyth's Princes Street with the Royal Institution Building under Construction is a powerful and complex depiction of renewal and progress within an urban environment. The picturesque landscape and sky makes its presence felt but is kept very much in the background, the perspective of Princes Street emphasising the foreground where work goes

on constructing the Royal Institution (now the Royal Scottish Academy). The ultimate effect is one of organic progress, implying no criticism of urban change and development. Bone shares with both Runciman and Nasmyth, a concern with the irreversibility of urban renewal and, as a consequence, the importance of the artist in recording the city's appearance before change. Bone became an important contributor to this attitude expressed in visual art.

The Influence of Meryon and Piranesi

Two major architectural printmaker-artists, Charles Meryon (1821-68) and Giovanni Battista Piranesi (1720-78), unsurprisingly and firmly made their impact upon Bone's art. The extent and relevance of these precedents are examined here.

In 1929 Bone recalled his initial interest in scaffolding and demolition sites as stemming from Meryon's work. "In one Meryon print there was a scaffold, so I followed the master with my first scaffold from the timely demolition of the (Glasgow) Gaiety Theatre." [39] Significantly, the most extensive collection of Meryon's work was housed in the B.B. MacGeorge Collection, held in Glasgow, which Bone may have known, although this is not certain. [40] If this was the case, Bone had, in his formative years as an etcher, a unique opportunity to study Meryon's work. He might well have been directed to Meryon by his reading Philip Gilbert Hamerton's Etching and Etchers, [41] a book which he certainly knew. The influence of Hamerton's book may well be highly significant as Bone was exposed to it at an early stage in his career and it provides a platform for Bone's later

art. In Hamerton's book there is a chapter on Meryon where it is noted inspiration of the construction work taking place under Haussmann and Louis Napoleon in Paris. Aspects identified by Hamerton indicate a connection between Meryon and Bone. In reference to *La Pompe Notre-Dame* he writes: "The intricate arrangement of the massive carpentry is expressed with evident enjoyment and a strong sense of construction." [42] Hamerton notes that other Parisian etchers these type of architectural scenes, for example, Maxime Lalanne and Martial, the latter of whom he writes, "This is *historical* art in the truest and best sense, genuine history of what the artist has witnessed, first of that old Paris which Napoleon III demolished, and then of those other and more fearful demolishings executed by shell and flame." [43] The urge to record change and transition within the city, whilst at the same time going beyond historical and topographical recording, is shared between these French artists and Bone, as well as Runciman and Nasmyth cited above.

In *La Pompe Notre-Dame, Paris* (1852), Meryon chooses a low viewpoint on the opposite bank of the Seine which pushes to the foreground a complex array of struts and scaffolding which support the lower roof of the water pump. Meryon's ability to render deep shadow and highlights in a coherently-understood scaffolding structure must have deeply impressed Bone, as evidenced in, for example, Mitchell Street, Glasgow **[Fig. 23]**, or the more sophisticated Building. For Meryon, in *La Pompe Notre-Dame, Paris*, it is this functional, civic building which is his main interest rather than the great symbol of Paris, Notre-Dame Cathedral which lies, all but obscured, in the background. Meryon here has inverted the popular architectural hierarchy in order to focus on an unappealing aspect of

modern Paris in preference to the more traditional and familiar Cathedral. In a similar subversion of the standard hierarchy, in Leeds (1905) and Leeds Warehouses (1905) **[Fig.24]** Bone presents us with an industrialised, tenement scene which is, however, overshadowed by the 'medieval' presence of Leeds Cathedral in the background. [44]

Commenting on the nature of the city through the confrontation of the modern with the ancient is also present in Meryon's *Le Styrge* (1853). The main focus, a gargoyle on Notre-Dame Cathedral, overlooks the sprawling cityscape of Paris from its high vantage point. The church tower of Tour St. Jacques is in the middleground, providing, along with the gargoyle, a second 'medieval' focus around which flows modern Paris. There is an echo of *Le Styrge* in Bone's Shipbuilders, Whiteinch. In this work, Bone brings a workman close to the picture plane, and through his gaze, creates a link across an active scene towards the monolithic ship under construction at the Barclay Curle Yard. The ship in relation to the workman can be equated with that of the Tour St. Jacques and the gargoyle. The equation between this ship and a Gothic cathedral seems intended; the ship, with its bow pointing upwards forms a series of arches resembles a cathedral. This impression is supported by Bone's depiction of the corps of workmen who surround and climb the scaffolding itself, alluding to a parallel between these shipbuilding workers and their medieval counterparts. A tendency to medievalise the subject is seen in the technical tour-de-force The Great Gantry, Charing Cross Station (1906) **[Fig. 25]** with the gantry scaffolding and railway station canopy forming the cathedral-like structure. The aura is emphasised by daylight which comes in from the rear and the open slats in the structure above, as if

through stained glass. As in Shipbuilders, Whiteinch, the workmen are treated as archetypes, forming animated groups which individually are dwarfed by Bone's major preoccupation, the gantry itself. In The Great Gantry, Charing Cross the modernity of the scene, as opposed to its medievalising aspect, is only indicated by the assembly of steam trains and wagons in the lower right-hand corner.

Bone can accurately be described as visualising an unidealised and unflattering aspect to his urban and industrial subjects, but not one that was necessarily pessimistic about, or critical of, the city as a modern form of experience. In this he contrasts with Meryon who certainly did have a negative view of the city. Meryon was a deeply melancholy artist, pessimistic about the rise of urbanisation and industrialisation, who ultimately suffered from mental illness at the end of his career. Bone takes formal direction from Meryon, in his depiction of complex architectural networks, and interest in a dialectic between the modern environment and the medieval. In spirit, though, their work remains very different.

Bone, from the earliest point in his etching career, was familiar with the work of Giovanni Battista Piranesi, as his correspondence with D.S. MacColl cited above proves. [45] Both Piranesi and Bone trained initially in architecture before moving into architectural etching. The exact form of this influence, however, can tell us much about the intentions of Bone's work.

Piranesi's *Carceri d'Invenzione* (first versions from c.1745, a second edition being published in 1761) are the artist's most prominent masterpieces, and consequently the ones most influential on Bone. The *Carceri* construct a theatrical architecture which Bone responds to in general terms in many of his most ambitious etchings, whilst always rejecting the fantasy element so central to Piranesi. [46] Specific details, for example, include the rising pulley system in Demolition of St. James's Hall, Interior (1906) **[Fig. 26]** which seems to quote the rigging which rises upwards on the right of the *Carceri, VII*. Another example is Piranesi's placing of ladders in the foreground of A cistern at Castel Gandolfo (from the *Antichà di Albano e di Castelgandolfo*), which Bone imitates in Demolition of St. James's Hall, Interior. The impression of infinite recession encouraged by Piranesi in the *Carceri* is also a theme of Bone's. In Demolition of St. James's Hall, Interior, Bone makes use of the raking daylight which fills the main area of the hall. This exaggerates the spatial separation between the arches in the foreground and both the large and subsiduary arches in the background. This, combined with the Bone's darkening of the foreground (a device which increases the feeling of recession used by Piranesi in *Carceri, VII* and *XIV* help to heighten the epic qualities of the structure and, by inference, the work going on inside it. [47]

Bone's The Great Gantry, Charing Cross Station is perhaps his finest and certainly most complex industrial subject. An earlier prototype exists as a small pencil drawing Millar Place, Glasgow (1899) whose small archway above a street seems to look forward to the grand-scale, latticed wooden scaffold arch of The Great Gantry. Two lively pen and ink drawings exist

collectively called Compositions. Charing Cross Station (1906) [Fig. 27] which are studies for the larger etching. Broadly executed, these works concentrate primarily on the effect of light, and the extent to which it is divided by the slatted scaffolding of the gantry underneath the roof. The workforce are indicated only by the most summary of ink marks in the foreground.

Bone also did a large finished drawing (1906) for The Great Gantry [Fig. 28]. Here, the trains are placed on the left hand side indicating that the final etching is a reversal of the actual scene. The drawing is a technical tour-de-force showing a great degree of control, observation and animation. Perspective is worked out clearly as is the exact structure of the wooden scaffold showing Bone's analytical ability. Bone here juxtaposes an analytical concern to clarify and explain the full intricacies of his subject and a Romantic-inspired enthusiasm for the scene in all its overwhelming visual drama.

The Great Gantry's attention to recessional devices such as the repeated overlaying of diagonal, horizontal and vertical beams, owes much to the same devices used by Piranesi. The deployment of pulleys, rigging and ladders visually elevates the view as well as extending it back. In this sense, Bone is expanding the experiments with interior spatial relationships explored previously by Piranesi, although in the context of real rather than imaginary architectural structures.

Whilst Piranesi should be considered the dominant influence on Bone, we must also accept the likelihood of intermediary influences on Bone, for

example, illustrative and graphic artists such as Adolf von Menzel, whose The Steelworkers (1870s) also depicts a large, recessive interior and is articulated with fine dexterity. The fact, too, that in 1881 von Menzel produced The Knifegrinder, a subject also depicted by Bone, may validate the idea that other artists of the nineteenth century were in Bone's mind in treating these epic subjects of urban industry. [48]

A cited criticism of the work of Piranesi is that he reduces the figures in his compositions too severely in order to make the structures seem much larger than they are in actuality, for example, in The foundations of Hadrian's Mausoleum from *Le antichità romane, IV*. As Macdonald points out, "he made gigantism in antiquity part of his credo..." [49] In most of the *Carceri* works, for example, *Carceri, XIII* or *XIV*, the figures are not obviously employed in any meaningful activity. The figures are largely intended to locate architectural levels and indicate scale rather than actually use any of the instruments and machines which also populate the works. In general in is clear, therefore, that Piranesi's use of figures is chiefly to emphasise the drama articulated by the architecture and not for any intrinsic interest in themselves as such.

Bone responds to locations where intense activity takes place. Like Piranesi, he rarely includes large scale figures and parallels Piranesi's "gigantism in antiquity" with a gigantism in modernity. It is difficult to ascertain the extent to which Bone reduces the size of the demolition workers in Demolition of St. James's Hall, Interior, or the construction workers in The Great Gantry, Charing Cross Station for dramatic effect, although it is clear that each individual worker is involved in an

identifiable task. In an earlier work, particularly Shipbuilders, Whiteinch, Bone clearly is interested in the specific occupations of the men - lifting beams or pushing barrows, among other tasks. In Demolition of St. James's Hall, Interior we see a man constraining a horse, one looking at a plan, another two lifting a set of ladders. In The Great Gantry men hoist pulley ropes, lift beams or give directions. However, neither Demolition of St. James's Hall, Interior nor The Great Gantry could be considered as primarily narrative. Generalised and complex activity is emphasised rather than individual labour itself. In this it resists a narrative aspect prominent in much previous Victorian art depicting industrial subjects, such as Ford Madox Brown's Work (1852-65) and William Powell Frith's The Railway Station (Paddington) (1862). Bone does not lose though a strong sense of specificity, by contextualising his subjects within an identifiable event and place, unlike Piranesi's *Carceri*, which are located outside a specific place and time. [50]

Both Bone and Piranesi are interested in the changes wrought upon the built environment in the face of development and change. Bone's enthusiasm for the changing architectural appearance of London is in many respects close to Piranesi's enthusiasm for the constantly changing cityscape of Rome.

Bone's commitment to London as an urban and industrial landscape remained constant throughout his career, culminating in impressive, large chalk and pastel drawings, for example, St. Bride's and the City after the Fire, 29th December, 1940 (1941) **[Fig. 29]**. In these later works, which as examples of draughtsmanship are major tour-de-forces, Bone revived his

interest in extensive reconstruction work that followed the bombing raids on London, revitalising a theme which had dominated Edwardian London when Bone first arrived there.

BONE'S RELATIONSHIP TO FUTURISM AND VORTICISM

In examining Bone's relationship to the Futurist and Vorticist movements it is necessary to point out that he, as far as can be ascertained, makes no recorded statements regarding either movement. For this reason, speculations must be made on the basis of style and intention in Bone's work, as well as biographical circumstances and associated references. These do allow us to infer that Bone was indeed engaged in a dialogue with both of these movements. This section aims to establish the extent and relevance of this for Bone's art.

As has already been discussed, Bone's subjects from the earliest point in his career had anticipated subjects which were likewise to become central for the work of the Futurists: that of capturing the tempo of modern life as it existed in the industrial city of the early twentieth century. Examples by Bone of this type of subject are numerous, including Mitchell Street, Glasgow (1899), Queen Street Station, Glasgow (1910), Glasgow's East End (1911) and A Manhattan Excavation (1923-28) **[Fig. 30]**. All to some degree are positive representations of city and industrial life. An indication of the artistic context for the reception of Futurism and its British counterpart Vorticism may be seen in T.E. Hulme's statement from his book Speculations that, "...the new 'tendency towards abstraction' will culminate, not so much in the simple geometrical forms found in archaic art, but in the more complicated ones associated in our minds with the idea of machinery." [51] Bone's depiction of complex architectural and mechanical forms anticipates in a traditional, representational style the fully abstracting interests of Hulme's generation.

The dominant attitude exemplified by Bone is to present the activities of the city as suitable subjects for serious art, stemming as it did from his upbringing in Glasgow. It is explained in Bone's already-cited remarks on his home city and the Glasgow School in painting: "The Glasgow School did not paint Glasgow." [52] and "Glasgow's tenement life - Glasgow's working life, is a superb feast for any artist if the scales would only drop from his eyes." [53] Bone strikes a reformatory, if not quite revolutionary, note in rejecting 'high art's' neglect of the urban environment. Bone's comments highlight a negative characteristic of much Scottish art, both in painting and printmaking, that everyday subjects reflecting either urban or industrial reality did not make up a significant part of artistic production. Yet Scotland, and Glasgow in particular, was one of the first and most heavily industrialised areas in Western Europe. Due to many factors, including the interest in Scotland for French art suppported by patronage that avoided industrial subjects, the presence of industry was only rarely reflected in artistic subject matter itself. Bone shows himself sensitive to the fact that there existed a conflict between general Scottish modernisation since the Industrial Revolution and the image fostered by much of the arts, music and literature which avoided these changes.

It is significant that Italian Futurism was born out of a rejection of a similarly dominant image of Italy, as represented by the art of the Italian Renaissance, in favour of attention to subjects which reflected the modernisation and industrialisation developing at the beginning of the twentieth century within Italy. Futurist art centred on Milan, the most heavily industrialised city in Italy at that time. To this extent we can

trace a common drive in both Bone's work, initially in Glasgow, and the Italian Futurists' work, initially in Milan, as rooted in the tension between an increasingly changing modern environment and its attendant, and seemingly static, popular image. This image ignored modernisation, concentrating instead on Romantic pastoralism and historicism. This attitude represented an idealisation which no longer corresponded to the reality as experienced by the majority of people in either Scotland or Italy.

It is not surprising, viewed in this context, that close parallels in terms of subject matter occur between Bone and Boccioni. Direct connections between the two remain tentative and can only be posited on the basis that Bone did visit Italy in 1910-12, and that his Fifty Drawings, Glasgow volume of 1911 was newly published when the Futurists visited London in 1912. Of Boccioni's most significant works, three can be selected to show how they echo subjects of Bone's: The City Rises (1910) depicts horses and a scaffolded building, relating it, for example, to Bone's Demolition of the Old Barony Poor House (1908) **[Fig. 31]**; States of Mind I: The Farewells (1911) shares with Bone's The Great Gantry, Charing Cross Station (1906) and Queen Street Station, Glasgow (1910) the subject of a train and station; The Noises of the Street Invade the House (1911) shows workers digging up a street and erecting wooden poles. The interface between tenements and building work occurs similarly in Bone's Demolition of the Old Sugar Exchange (1910) and later in A Manhattan Excavation (1923-28), among many other works.

Bone's relationship to Meryon has been noted above, and his sympathy with Baudelaire's writings on the French artist. As Baudelaire wrote,

> "I have rarely seen the natural solemnity of an immense city more poetically reproduced. Those majestic accumulations of stone; those spires 'whose fingers point to heaven'; those obelisks of industry, spewing forth their conglomerations of smoke against the firmament...he forgot not one of the complex elements which go to make up the painful and glorious décor of civilisation." [54]

Baudelaire's enthusiastic response here to industrial subjects in Parisian art is an important precedent for the Futurist writings of Marinetti. The Italian theorist had been resident in Paris for some time, and can be said to have continued this aspect of Baudelaire's philosophy but, in his enthusiasm for urban and industrial subjects, raises it to a significantly higher pitch:

> "We will sing...the nocturnal vibration of arsenals and docks beneath their glaring electric moons; greedy stations devouring smoking serpents; factories hanging from the clouds by the threads of their smoke; bridges like giant gymnasts stepping over sunny rivers sparkling like diabolical cutlery; adventurous steamers scenting the horizon..." [55]

Marinetti's vision was of the city as "painful and glorious," to use Baudelaire's phrase.

Such an explicit manifesto would have been uncharacteristic for Bone. Yet in 1901, in a letter to D.S. MacColl, he wrote an interesting passage on one aspect of change in the city:

> "I don't see anywere (sic) any indications that people see how vastly a town's appearance at night has been changed and improved by electric lighting...A gas lit street was a series of feeble ellipses of light dubiously touching the foot of a dark

> tower...But consider electric light. The tower shoots into the dark sky - a monstrous blanched thing, from pinnacle to foundation discovered by a light such as only confronted cities long ago at seiges and conflagrations; the poorest city church becomes every night imposing in its lines.[...] I send you a little trifle of a church at night- please keep it, as an advertisement of my Electric Light Effect!" [56]

Bone here is making a specifically visual point from an artist's perspective rather than constructing a theory of modernity and change, such as that by Marinetti. Yet, for an artist who on one level may be regarded as somewhat reactionary and traditional, Bone's passage here presents him as extremely responsive to technological invention, and willing to adapt his art accordingly. Previous to electric light as a source of illumination in the city, gas shed only a tentative "feeble" light on the objects it lit. The result of this earlier type of street illumination gave a romanticising aspect to night scenes which was exploited by Victorian artists who wished to emphasise either the city as fearful and claustrophobic or romantic and mysterious, for example, Atkinson Grimshaw's View of Heath Street, Hampstead (1882). Bone's attitude to the city and modernity was entirely opposite to this. His letter indicates that he held a clear-sighted attitude this type of subject, which in its positive acclaim of change marks a previously undiscussed precedent for Futurism and Vorticism.

Bone's primary interest in city and industrial subjects in Glasgow meant that his art was antipathetic to academic styles. Since 1897 he had exhibited at the New English Art Club (N.E.A.C.) and following his move to London in 1901 he soon began submitting regularly. The N.E.A.C. was originally set up as an alternative to the Royal Academy. Although by no

means revolutionary in its aims it was, as Richard Cork points out, "the nearest approximation Britain then possessed to an avant-garde group of artists..." [57] It was founded in 1886 by Fred Brown, who later taught Wyndham Lewis, the leading theorist of Vorticism. Others involved since its founding included James Elder Christie, whose Anchor Mills across the Hammils (c.1870) depicts an industrial subject in Paisley. By the turn of the century, though, there was increasing unease at the N.E.A.C.'s traditionalism and failure to pick up on momentum being generated by contemporary European art. [58] In 1908 the Allied Artists Association (A.A.A.) was formed, which rejected the jury system under which both the Royal Academy and N.E.A.C. operated. Artists such as Walter Sickert and Wyndham Lewis, for example, exhibited at the A.A.A. However the role of the N.E.A.C. had not been completely usurped. Jacob Epstein was immediately befriended by Bone when he arrived in Britain in 1905. C.R.W. Nevinson, ultimately Britain's most prominent Futurist artist, attended meetings of the N.E.A.C. [59] Edward Wadsworth exhibited Harrow Corporation Brick-Works (1908) at the N.E.A.C. in 1911 and it is possible that this type of industrial subject, which was to be a consistently explored area for Wadsworth, owed part of its inspiration to the very similar subjects of Muirhead Bone. The position of the N.E.A.C., therefore, was ambivalent, a fact which caused much resentment within the more progressive sections of English art, as Cork points out. [60] Yet this duality in many respects served Bone ideally, being an artist who always rejected Modernist moves towards abstraction yet was deeply concerned with artistic means which expressed the modern environment. His loose connections with future members of the Vorticist movement before the First World War showed his sympathy with the spirit behind their work, a sympathy which he was able

to express positively in his willingness to employ and encourage them during the War through his role on the War Artists Advisory Committee. Bone can be seen to reflect the transition in British art between the predominantly narrative and representational art of the Victorian era and a move towards acknowledging developments in the European avant-garde, in particular that represented by the Futurist Movement.

ON THE WESTERN AND HOME FRONTS

In times of widespread national emergencies, such as that produced by war, the major function fulfilled by artists in the promotion of the war effort have traditionally centred on creating positive images of both the battlefield and the home front. An artist such as Muirhead Bone had in his pre-war work been consistently recording civilian achievements in engineering and urban development. Therefore a transition to similar subjects in wartime was a rational move. In a letter to D.S. MacColl, dated 14 May, 1915, Bone first outlined his plan for wartime employment:

> "I have a really great plan to get myself sent out to draw drawings of the war for the King's Library at Windsor. He doesn't want his records to be simply bound vols. of the "Daily Mirror", surely!...All my drawings and etchings, for the next two years - a grand notion!...If I'd been a German the German Government would certainly have got me to do this sort of work." [61]

Over the following year, culminating in July, 1916, the commission was consolidated as a civil rather than Royal job, as first proposed by Bone (the details of which are discussed in Appendix I). The acute pressures of Bone's commission and the opportunity to complete a large body of industrial subjects make this period in his career a particularly crucial one. As Stuart Sillars has pointed out, the official role of Bone and other artists was not merely to depict the industries themselves as worthy of protection from enemy fire, but as representative of more general national assets such as steel production and shipbuilding, which could be diverted to the war effort through military hardware. [62]

Both the Ministry of Munitions and the Ministry of Information (the latter based at Wellington House) ultimately employed Bone as an Official War Artist, commandeering his international status in order to further their propaganda aims. His work was to appeal to 'cultivated' taste in neutral and enemy countries, who, as Campbell Dodgson (then Keeper of Prints and Drawings at the British Museum) informed Wellington House, may be expected to know Bone's work. Bone had achieved pre-war recognition in Germanic countries, pointed out in 1909 by Dodgson in his catalogue raisonné of Bone's work:

> "In England, where official recognition is ever tardy, few etchings by Muirhead Bone are yet to be found in public collections. They are represented in far more considerable numbers in the museums of Austria, Hungary, Prussia and Saxony. In Scotland, the artist's native country, not one of his prints belongs as yet to any public collection." [63]

The aim therefore was not to produce 'populist' work of a more obvious nature, for example, in the manner of the overtly anti-German caricatures of Louis Raemaekers. [64]

Prior to the War, much of Bone's art was of ostensibly ugly subject-matter - urban scenes, dereliction, ruin and reconstruction. Bone had already depicted the upheaval and demolition of much of Victorian London at the turn of the century. In this context, the cities and towns of France during the War contained not unrelated scenes of desolation, notwithstanding the less controlled appearance of wartime bombing upon these French subjects. As an artist with strong observational skills in this type of subject, Bone was ideally suited to record the conditions which could be expected in France at that time.

As will be seen, Bone's rate of production was very high. He was the first artist who the Treasury would agree to finance, and, given that his campaign to create a job for himself had been so successful, it is not surprising that pressure on Bone to produce as much work as possible for both Wellington House and the Ministry of Munitions was very high. In retrospect, it is clear that his willingness to fulfil the expectations of his employers took its toll, under what were unprecedented conditions of modern warfare.

Prior to Bone's official posting to the Western Front in July, 1916 he did execute a small selection of industrial, chiefly railway, subjects, for example, Construction of an Underground (1915) which shows a railway line being lain below a bridge, Railway Approach, Glasgow (1915), Charing Cross Bridge, London (1916) and Villiers Street, Strand, London (1916). His only work explicitly of the war was Piccadilly Circus - 1915 (1915) **[Fig. 32]**. It shows central London at night illuminated both by electric street lighting and by searchlights across the skyline. There has been a claim that the image is based on a 1907 drawing to which alterations in figures and lighting were made, for instance, the uppermost half of the street lights were obscured in accordance with wartime regulations on public lighting. [65]

Once his commission started, Bone paid two separate visits to the Western Front, in 1916 and 1917. However, the body of work seldom includes industrial subjects and, given the conditions under which it was made, is only of variable quality. Certainly the claim that Bone's drawings at the Front lack energy has some weight, largely because Bone, as

fundamentally a representational artist, refused to draw what was not before him. As Malvern has pointed out, Bone produced,

> "...impartial records, carefully witnessed and meticulously detailed from sights seen at first hand. The lack of finish in the sketches displays evidence of the artist's touch evoking the immediacy and instantaneity of capturing a changeable landscape and emphasising that the work is unpretentious, genuine and personal not fabricated. At the same time, the legibility of the drawings is firmly located within established, orthodox practices, employing a continuous space and balanced composition derived from topographical tradition." [66]

It is not that Bone did not depict action at the Front, which would present obvious difficulties, but rather that Bone's manner of work did not allow for much play of imagination with regard to, for example, a work like Ruined Trenches in Mametz Wood, (black chalk and wash, Plate LII, The Western Front, Vol.1) Regarding the specific subject matter it shares a similar origin with Paul Nash Sunrise, Inverness Copse, (pastel, plate 1, British Artists at the Front, part 3) yet Bone, unlike Nash, is not concerned with exploiting the symbolic aspect of the scene. Nash articulated his feelings about war by representing it as an attack on nature. The destruction and dereliction of the natural world by human force and the associated self-destruction of humanity are Nash's subjects. Bone's previous work indicates quite clearly that he did not share Nash's predisposition towards symbolism. [67]

Unlike Nash, Bone was not a landscape artist. His best work before the War had always focussed strongly on a central, coherent image, for example, Shipbuilders, Whiteinch (1899) and Building (1904). It is notable that Bone's most popular image from the Western Front was a charcoal

drawing, Tanks (1916) (Plate XLII, The Western Front, Vol.1) **[Fig. 33]**, which likewise has a strong central focus. It depicts a large tank convoy from below rolling over the terrain, the image dominated by the very close proximity of the leading tank. Its subject is seen from the viewpoint of the enemy, as a threatening instrument of war bearing down on the victims beneath. This was significantly the first recorded drawing ever to be made of a tank and shows Bone responding with remarkable confidence in dealing with the aesthetic demands of this new example of technology. Despite all the serious challenges which hampered Bone's art during the First World War, Tanks shows that within his own field his war work could rise to very high standards.

The impetus behind promoting the use of representational artists at the Front was assisted by the lack of photographs available for publication to support the war effort. Artists were expected to represent action on the Front Line in a parallel way to that which Evelyn Carey, in photography, had undertaken with his Forth Rail Bridge commission. Behind both lie the intentions of those who commissioned the work in order to explain, publicise and produce a record of their activities.

Artistically speaking, Bone's output in general over this first period on the Western Front is disappointing, with the artist relying on few of the strengths which had informed his pre-War work. However, one identifiable quality is the strong feeling of displacement captured in many of these drawings: the artist coming across deserted ruins, or gates with 'No Entry' signs. One senses that the artist is left among the ruins searching for a subject which eludes him. This characteristic captured in

Bone's drawings for The Western Front could be said to reflect a very serious phenomenon in modern warfare, with the sense of displacement affecting both the artist as he tries to tackle an unprecedently large and tragic subject and also by the troops themselves as they struggle for existence amongst the destruction which surrounds them. An example of both Bone's and fighting soldiers' inability to control and understand the scale of what was going on around them is found in the image Distant Lens. From Notre Dame de Lorette, April 1917 (1917) **[Fig. 34]** where soldiers wander around a completely destroyed and disrupted trench landscape. The proposition for viewing Bone's drawings of this time as highly charged critical comments on the nature of modern warfare is also made by Duncan Macmillan in discussing works such as A Via Dolorosa; Mouquet Farm (1916). [68] Other writers have also conjectured that there may be more to Bone's work of this period than at first seems apparent. For example, Sillars writes that, "...Nevinson, Orpen, Roberts and others display mounting cynicism in their canvases, and even the apparently uncomplicated Muirhead Bone reveals a critical stance of some kind in his lithographs." [69] Bone was to comment later on his working method and on his Western Front production in these terms: "...all my best drawings are done on the spot - I'm not like an artist who can work up pictures from notes he has taken." [70] He later expanded on this view, when he wrote, "I do not like to imagine war scenes and so only drew what I saw, and this was only when I had a chance to digest it. This limited me very much and I am afraid resulted in rather prosaic work." [71]

Bone's first period of work as Official War Artist can thus be seen to represent a major and largely unrecognised contribution to the

treatment of modern warfare. There were many aspects of Bone's art which lend weight to this first series in terms of understated emotive imagery and a serious perspective on the changing function of the war artist and of modern warfare in general. However, Bone's body of work on the Western Front shows him clearly uncomfortable with many aspects of his first commission.

Bone was significantly more successful in artistic terms during his second trip to France in 1917, where he recorded the ruins brought about by the Allies' "Operation 'Alberich'" which drove the German Army behind the Hindenburg Line. [72] He was able to concentrate on object-based images such as the charcoal drawing The Great Crater, Athies, May, 1917 (1917) **[Fig. 35]** which, in showing a ruined house positioned behind a huge crater which occupies the foreground, relates strongly to a pre-War subject, Demolition of the Old Sugar Exchange (1910) **[Fig. 18]** in its creation of arcing shadows, a strong light from the right hand side and the siting of buildings on the far side of the crater.

Ultimately the workload expected of Bone by his employers and his self-inflicted work regime proved destructive. He was required to produce a vast number of images for Wellington House's series The Western Front, annotated by C.E. Montague. A letter from Masterman to the Front regarding work for the Wellington House publication illustrates the extreme pressure of deadlines which Bone was obliged to meet: "...If Bone has any more drawings ready for reproduction would you ask him to send them over immediately? We need not want for a portfolio full - if he cd.

send 3 or 4 or any complete - as we want to be up to date with the next issue and to get as many scenes of places still fresh in the public mind." [73] In employing their first Official War Artist it seems clear that Wellington House misjudged the ability of an artist to produce at speed high quality and topical images for publication.

Munition Factories Commissions

In between Bone's two visits to the Western Front he was employed by two bodies: the Ministry of Munitions and the Admiralty. The Ministry of Munitions employed him to record work inside munitions factories in England, whilst for the Admiralty he visited the docks at Southampton, Rosyth and Glasgow.

The early part of 1917 was taken up with organising Bone's visits to munitions factories. [74] From a letter by Lord Chetwynd at the National Shell Filling Factory, Chilwell, Nottinghamshire to Ivor Nicholson at Wellington House we know that Bone took this undertaking seriously, spending time considering the best views available: ".. I understood from Mr. Bone that he would like to come back and spend some more time drifting about the Factory, before finally deciding what sketches he would make. I thought his sketch of the big shell store excellent." [75] The client's satisfaction with Bone's work is confirmed by Bone's response in an undated letter to Gowers written from Coventry: "I am still finding lots to do here and hope to send or bring a good batch of drawings by the end of this week. It is a great joy to get the really good chance these drawings give me." [76] It is clear that Bone had no precisely worked out itinerary

regarding which places he visited as his letter of 1 March to Gowers shows: "I am up here [Redcar, Yorkshire] studying the steelworks and hope to bring some good work back with me - the subjects are splendid and a contrast from Coventry. How about the Admiralty? I would like to go on from here to Newcastle if I got the permission to draw in such yards as the Elswick and Jarrow ones..." [77]

From early in 1916, the Ministry of Munitions clearly wished to see Bone visit the munitions factories around Britain. In correspondence to D.S. MacColl, 3 May 1916, Bone says that John Buchan had passed on the message that Lord Newton "...was warmly approving of the recommendation of Masterman's Committee that I should be used for this work "drawings of munition work and probably the front."" [78] Specific propaganda aims of the Ministry of Munitions as well as the Admiralty feature here in that those industries felt many pressures of unrest among the workforce and of changing work practises, such as the admittance of women and semi-skilled labour into skilled jobs (known as Dilution.) The concern with Dilution affected factories across the United Kingdom. [79] The Ministry of Munitions and the Admiralty must have considered the benefits of employing a war artist to record sympathetically the industrious and active side of munitions and shipbuilding when moral and cohesion among the workforce was fragile. Bone's Home Front commissions, then, were shared between munition production and shipbuilding.

As soon as Bone started his commissions within Britain, we can see parallels between him and another significant topographical printmaker of

this century, the American printmaker Joseph Pennell. [80] Bone was very aware of this, as he writes that, "I find that at Hugh Bell's and Dorman Long's Steel works I was on the track of Pennell - but there are crumbs to be picked up all right." [81]

Pennell's trips to the Western Front were as unrewarding as Bone's, in that the destruction wrecked on the cities and countryside in France and Belgium was both emotionally overwhelming and artistically unsatisfying. He returned to London where he was given permission in early 1916 by the British Government to have access to British munitions factories in order to make drawings. This was, notably, before Bone's appointment as an official British war artist. Bone, no doubt spurred on by his experiences at the Front but also consistent with his pre-War artistic concerns, wrote: "To tell the truth I feel that these scenes of great works are peculiarly my own and I would much like to have a "go" at them and to prove that I could do them better than Pennell." [82] Clearly, Bone feels himself somewhat in the wake of Pennell, reinforced by the fact that both artists' ouevre was dominated by industrial subjects which extended back to well before the outbreak of war. [83]

The aesthetic and practical differences between Bone and Pennell in general and their war work in particular are substantial. Pennell seems to have benefitted from being commissioned on what approximated a 'free-lance' arrangement, unrestricted by an official remit. He wrote in 1917, that "...though I do not believe in war I do not see why some pictorial record of what is being done to carry on the war should not be made - made from an artist's standpoint - for we are in it, being in the world,

but I am not of it." [84] Even had he wanted to, Bone, as a paid employee of the government, was not in a position to forward pacifist statements such as the one Pennell makes, yet the fact that Pennell's work was shown in the American capital when the war was still being fought indicates that his lithographs, regardless of Pennell's own statements, were not seen in any way as a negative influence on the United States' war effort. Pennell's enthusiasm for the factories dedicated to the war effort in Europe and the United States is at times so incessant as to border on the incoherent:

> "It is the working of the great machinery in the great mills which I find so inspiring - so impressive - for the mills are shrines of war - though the churches now try to rival them. But the mills are the modern temples, and in them and not in the churches do the people worship. And if only the engines turned out more engines of peace - how much better the world would be...But war work in America is the most wonderful work in the world and that is the reason why I have drawn some of the work I have seen - seen in these endless looms of time, where history is being woven, and I have also seen the aeroplanes and the camps and the shipyards and all are amazing." [85]

This acclaim of industry, close to the Futurist manifestos in its ferocity, was too aggressively subjective for Bone to subscribe to. Pennell was a prodigious writer, in contrast to Bone who was more reticent in describing in words what his intentions were in art.

Whatever Pennell's extrovert nature, in comparison to Bone he does not necessarily show himself as artistically more confident. The lithograph The Bay of the Thousand Girls by Pennell shows him stylistically more tentative than a comparable charcoal and wash drawing by Bone, The Hall of the Million Shells (1917) **[Fig. 36]** where Bone has

more fluently and convincingly handled the problem of multiple repeated shells, placed in ranks inside a huge factory. The similarity in the titles gives an obvious indication that some degree of direct rivalry existed between the two.

As has been discussed, Bone was allowed access by the Admiralty to the shipyards engaged on construction for the Navy, but it is interesting to note that, in his notation to the work The Old Shipyard, Pennell says that "The Admiralty would not let me draw the naval shipyards, but here were merchant ships being built..." [86] Perhaps the fact that Pennell, although from an allied country, was not British barred him from the naval shipyards, but also another consideration may well have been the declining morale and the increasing union unrest evident at that time in the shipyards, especially on the Clyde. Pennell, as an 'outsider', may have been under more suspicion than Bone that he might draw attention to this development in the shipyards.

Bone was significantly more restrained in his approach to industrial subjects than Pennell, as is clear from the tone of the latter's writing, yet not necessarily more restrained in his actual treatment. For Pennell industry was the only subject of any importance and in this he represents an unparalleled peak in nineteenth-century industrial positivism continued into the twentieth. Bone only on rare occasions sought to intimate the same interests as Pennell, for instance in the text accompanying The Night Shift. Working on a Big Gun (1917) Bone describes as: "A scene so romantic in its mingling of grimness and mystery that one thinks with compunction of the long line of romantic artists whose lot it was not to have seen it."

[87] The fact that Pennell was an American artist, whose country was only at the beginning of its industrial and technological dominance of the Western World, helps to explain this artist's more insistent positivism in comparison to Bone, whose cultural roots stem from the Victorian era in Britain.

In effect, Pennell, like Bone, pursued subjects which he thought of as having an intrinsic historical worth, hence his trips to the Panama Canal, the industrial regions of turn-of-the-century America, and Europe during the First World War. He wrote, "I believed, as I do now, that illustration is a most serious, a most important form of art..." [88] But, as Barbara Stephanic points out, "Throughout his life Pennell was a dedicated documentarian and illustrator but his tendency to idealise the landscape and romanticize modern architecture is a consistent characteristic." [89] In Pennell's work the celebration of the machine age is offset by his recourse to smoke and steam which obscured many of the physical objects present in his subjects in favour of a picturesque quality.

Bone produced many interior scenes of munition works, one of which is The Gun Pit. A Gun Jacket Entering the Oil Tank (1917) **[Fig. 37]** where the suspended gun barrel hovers above the pit, behind which Bone indicates the height and drama of the factory. It bears some relation to pre-War works such as The Demolition of St. James's Hall. Interior (1906) **[Fig. 26]**, although the use of charcoal gives a softer, less defined line, which detracts from the atmosphere more intensely portrayed in the earlier work. However, compared with his output in France, Bone here shows himself significantly more confident with his subject.

Bone was evidently very pleased with his work in the munitions factories, as his enthusiasm is recorded in letters written at the time: "I do want Mr. Masterman to understand that I honestly think this shipyard work is exactly my metier and that if I'm given a chance I'll turn out some grand things.// I think the work I am doing here is <u>better</u> than the work I did in France." [90] On 23, November, 1917 he wrote again to Yockney: "It is very interesting hearing what is being done in France but I strongly feel that my munitions and shipyard drawings are the best things I have done by far (and everybody tells me so) so I wish it could be arranged that I went on with my shipyard etc drawings in England for I know that in this weather at this time of the year I would be able to do very little indeed out in France while I would get through a great deal of work at home." [91] [92]

<u>IN THE SHIPYARDS</u>

In evaluating Bone's work of the shipbuilding industry it is important to summarise briefly the political situation on Clydeside around the time Bone was recording the shipyard construction. Bone's commission in 1917 should be seen in the context of a certain amount of industrial unrest expressed by the workforce throughout the War. [93]

Glasgow became heavily based on naval contracts during the arms escalation before the First World War when other foreign rivals were expanding into the areas of merchant shipping. [94] Due to the economic prosperity in the West of Scotland created by the shipbuilding and engineering industries, prior to the First World War, there was only

sporadic agitation between the unions and the shipyard owners themselves, exceptions being the 1908 Clydeside shipyard workers' stoppages, the Dockers' Strike in Glasgow, 1912 and the national strikes of seamen, dockers and miners between 1911 and 1912. Mechanisation was seen as a threat to the shipbuilding and engineering workforce who had by now become highly specialised and skilled, so "...by 1917 and 1918 the engineering industry of the Clyde had been virtually revolutionised by the introduction throughout of automatic machinery, and the adoption of mass production." [95] The pressures of new work practices under war conditions resulting in the charged atmosphere of wartime Clydeside provides the context for Bone's works of 1917.

Whatever the primary motivation for the major action which undoubtedly did take place, it is certain that the Ministry of Munitions, formed in 1915, did view the situation on Clydeside with anxiety. [96] In March 1916 the strike at Beardmore's Parkhead factory led by David Kirkwood caused much concern at the Ministry of Munitions coming as it did just before the planned Spring Offensive on the Western Front. [97]

We have no evidence to suggest a left wing political commitment from Bone; indeed he could be seen more appropriately as a rather apolitical artist. It seems unlikely that this fact was lost on his commissioners in either the Ministry of Munitions or the Admiralty. Certainly there is no hint whatsoever in Bone's final works of the profoundly delicate position in which the shipyards were then gripped.

Bone's first visit to the shipyards was in Rosyth Dockyard on the Firth of Forth, at the beginning of March, 1917, where the Grand Fleet was based. Here he did work related to life in the docks and on the battleship H.M.S. Repulse. Part of Bone's output over this period was published in a portfolio format by the Admiralty as With the Grand Fleet (1917), a series of six lithographs. It comprises: 1. The H.M.S. "Lion" in Dry Dock **[Fig. 38]**, 2. On Board a Battle-Cruiser (H.M.S. "Lion"), 3. A Battleship at Night, 4. Inside the Turret, 5. "Oiling": A Battleship taking in Oil Fuel at Sea, 6. The Boiler Room of a Battleship.

The H.M.S. "Lion" in Dry Dock recalls The Dry Dock **[Fig. 10]**, executed almost twenty years earlier in 1899. In the later image, the viewpoint has been significantly lowered and is much nearer the hull of the ship. This emphasises the drama and scale of vessel. The fact that the top section of the bow has been cut off and the perspective seems to have been exaggerated enhances the feeling of forward movement.

Bone's first reference to the Glasgow shipyards is in a letter to Masterman, 27 March 1917, written from London, where he writes

> "...On Thursday night I intend travelling to Glasgow and being there about a week, drawing in the shipyards. I would be very grateful if you would allow me about a week's holiday and I would go out to France about the 14th or 16th April. I feel myself getting in need of a few days holiday...these [French drawings to be done] and the Glasgow Shipyard drawings and some naval ones not used in Part V [of The Western Front] should make up a number for Part VI. Part VII (published 25 June) might be wholly new French drawings. Part VIII might be the navy again chiefly." [98]

During his period on Clydeside Bone produced two series, The Building of a Ship for the Government's Efforts and Ideals collaboration and The Clyde Series, (some extra images not in these series were included in The Western Front.) The resulting works were favourably reviewed at the time, with critic Malcolm Salaman expressing the opinion that Bone's The Building of a Ship series, "...must surely rank with the greatest achievements in graphic art." [99] As has been identified by Sillars, there can be seen to be clear connections between work commissioned for the home-based industrial centres and political and military pressures occuring at the Front. [100] Thus these two areas of the war effort at home and abroad are intrinsically connected. As Sillars argues (when proposing that the Somme Offensive itself was initiated in part to placate industrial unrest at home in the munitions industries):

> "This is not to suggest that a deliberate campaign to placate the workers was launched under official instructions: rather it is to imply that those in authority or positions of influence, wither consciously or subconsciously, saw the reporting of the bombardment as a chance to stress the involvement of the industrial community in an unprecedentedly positive way - and at the same time stress the need for continued unremitting effort amongst the munition-workers." [101]

In this context we should view Bone's visit to Clydeside, one of the centres of industrial unrest and Bone's native region, as a politically astute choice by the Ministry of Information.

The Building of a Ship series consisted of the following lithographs: 1. A Shipyard, 2. On the Stocks **[Fig. 39]**, 3. Shipyard seen from a Big Crane **[Fig. 40]**, 4. The Workshop **[Fig. 41]**, 5. A Fitting-Out Basin, 6. Ready for Sea, and was Bone's contribution to the Efforts and Ideals series. [102]

The Workshop relates most strongly to an earlier etching, The Great Gantry, Charing Cross Station (1906) **[Fig. 25]** in that it depicts a large interior industrial scene lit from the rear with men attending to a variety of tasks throughout the shop floor. Due to the fact that Bone was obliged to emphasis the activity of the workshop the figures are proportionately larger in this work than The Great Gantry where the building and scaffold itself are foregrounded rather than the workforce.

On the Stocks is a re-interpretation of Shipbuilders, Whiteinch (1899) where a large ship under construction is situated on the right of the composition, encased in wooden supports and worked on from all positions by small figures indicated in a sketchy way. Although both compositions recede along the yard at the left-hand side, On the Stocks maintains a more even, frontal interest in the semi-abstract quality of the cranes, pulleys, supports and ropes which fill the scene almost completely from right to left. This interest in scale and complexity, a major focus for Bone, is also continued in A Fitting-Out Basin and A Shipyard also from The Building of a Ship series.

Bone chose a striking vantage point for Shipyard seen from a Big Crane, which allows a panoramic survey of the shipbuilding area below and a view across the Clyde to tenements and chimneys in the far distance. The dramatic handling of perspective, and control of the abstract, dynamic design of the image as a whole makes it a successful work, and highly suitable for reproduction by his commissioners. Over October and November, 1917, Bone exhibited his drawings at the Whitechapel Gallery, in the East End of London, the exhibition proving hugely popular, attracting 43, 500

visitors. Clearly such high profile depictions of industry may have been a source for many other artists who saw the exhibition or illustrations of the works.

The Clyde Series of lithographs comprised the following: 1. Lifting an Oil Tank into a Train Ferry **[Fig. 42]**, 2. Building a Liner, 3. A Big Liner, 4. Reconstructing a Shipyard, 5. Underneath a Ship, 6. Lowering a Boiler into a Ship. Bone's subject was of the Fairfield Shipbuilding and Engineering Company, already familiar to him from his early career in Glasgow. [103]

C.E. Montague, who was commissioned to write the accompanying text for The Western Front volumes, wrote of Bone's shipbuilding works:

> "There is the happiest correspondence between Mr. Bone's art, with its splendidly generalled armies of dutiful details, and an industry like ship building in which a puissant unity of result is produced by the orderly joint action of multitudes of ant-like workers, every one of them indispensible while every one is indescribably dwarfed by the hugeness of that which he helps to produce." [104]

Thus, Montague makes a somewhat strained but significant attempt to label Bone's style as non-subversive, dedicated and essentially community-based in order to draw a basic parallel between Bone's work as an artist and the shipbuilders' work on the docks. Malvern has correctly pointed out Montague's central role in verbally presenting a context in which Bone's less explicitly propagandist work should be viewed. [105]

It is beyond doubt that there was a component in Bone's output which could be directed towards propaganda purposes by Wellington House. As Harries writes:

> "Bone's pictures could be used to fuel belief in our fighting chance to win; his The Hall of the Million Shells **[Fig. 36]**, for example, carried the message that the shell shortages of 1915 were over; and his shipyard scenes, published in October 1917, with the German submarine campaign still in full force, hinted at inexhaustible naval strength in reserve." [106]

His imagery also hints very strongly at the war effort of women, who performed the chief tasks on the shop floor: such popular concentration on women's role in munitions production was also made in the papers of the time, for example, the Daily Mirror produced a headline relating to this area of work which read "The women of Britain are winning the war for us at home." [107] Bone supplemented this popular image in such works.

The work produced by Bone on shipping subjects during 1918 continued to be published after the war, for example, in his brother David's Merchantmen-at-Arms (1919) where he illustrated the role of the merchant navy in the war effort in drawings such as The Old and the New. The 'Margaret' of Dublin and R.M.S. Tuscania and A Torpedoed Ship in Dry Dock. [108]

Ultimately and irrespective of the artist's own apolitical intentions, the propagandist aims of his commissioners were fulfilled by Bone in that his images can be viewed as positive depictions of shipbuilding at that time. The context of his official commission may possibly have pushed Bone towards self-censorship. Yet, there is nothing in Bone's work up to

that point to indicate a critical subtext to the images he was commissioned to do for the Admiralty. If he had, we would have expected The Grand Fleet series to go unpublished. It seems justified to view Bone's work as ideally suited in intent to the Governments purpose, however this does not necessarily imply that Bone in any way modified his approach in order to accommodate his commissioners. Bone's successful wartime images relate directly to the work he was doing before the war thus indicating that he was being truthful to his own art first and foremost. Bone's lack of a radical and political visual polemic in his art which might subvert the aims of Wellington House makes their choice of him as the first official war artist highly astute and unproblematic.

The British War Memorials Committee

Over the latter stages of the War, Bone was responsible for establishing the British War Memorials Committee whose aim it was to continue to buy works for the Imperial War Museum collection using funds which Bone himself made available from the proceeds from his Efforts and Ideals lithographs. [109] His key involvement with this Committee, which encouraged many artists who were to develop British modern art in the inter-war period, shows Bone in an oblique but important role regarding the early stages of these artists' careers. As Harries writes:

> "The importance of Bone's role in the choice of further artists cannot be overstated: with his keen interest in and knowledge of modern art he combined enthusiasm and energy which left his colleagues breathless, and the MoI's ultimate selection, made principally from among the British artists on the Canadian list and the lists produced by Bone, was extraordinarily catholic." [110]

Harries continues: "Bone had suggested, without response, the names of several women artists who have subsequently become much better known - including Dora Carrington, Dorothy Brett, Gwen Raverat and Gwen John..." [111] Other rejected nominees by Bone included David Bomberg, Lucien Pissarro, Gordon Craig and Charles Rennie Mackintosh. J.D. Fergusson was enlisted, although "...he found there an inspiration 'which I have not found before in my work', none of his pictures was aquired." [112] (See Part Two, Chapter 3).

As an example of Bone's undogmatic approach to employing war artists, he certainly supported Nevinson, as described by Harries: "Nevinson's own account in Paint and Prejudice of an appointment received through the intervention of a string of generals is not substantiated by the official correspondence, which shows his chief advocate to have been Muirhead Bone, at that time a friend and admirer..." [113] It may be significant that one of Nevinson's prints, Boesinghe Farm (1916), is of a shelled-out building, a typical subject of Bone's, re-interpreted in a semi-abstract Vorticist style.

Although Bone's style could not be considered avant-garde, "...he had remarkably eclectic tastes and sympathy with work completely unlike his own (he was a particular champion of Stanley Spencer and Jacob Epstein), and his enlightened views were to be crucial in shaping the course of official war art." [114] The reference to the support given to Spencer may account in part for Spencer's commitment to official war art in the First World War which led to his decoration of the Burghclere Chapel, in 1923 and in the Second World War where, significantly, he picked up were Bone had left off, in the Lithgow shipyards in Glasgow, producing an outstanding

series of major oil paintings, which included a variety of subjects such as Welders (1941), Riggers (1943) and Furnaces (1946). [115] Bone's support of and connections with Spencer's early career are clearly demonstrable. In 1914, Bone bought a work by Spencer called Zacharias and Elizabeth (1914). [116] In 1918, Yockney wrote to Spencer offering him a post as a war artist, saying "Mr. Muirhead Bone, who takes a great interest in your work, has suggested that you could paint a picture under some such title as A Religious Service at the Front..." [117] Thus, it is clear that the connections after the war and Spencer's continued interest in industrial subjects which culminated in his Second World War series can be seen to have in part had a genesis in the influence of Bone.

Bone continued his connection with the Clyde and Glasgow as a war artist in the Second World War working for the Admiralty. His pencil, pen and chalk drawing Small Craft Fitting Out (1940. Scottish National Gallery of Modern Art) shows a continued interest in panoramic scenes of industry relatively late in his career, and was executed at the same time as Stanley Spencer was beginning his commission in Port Glasgow for the War Artists Advisory Committee. It would have been unusual if the two artists had been in the same region and not continued their contact given Bone's close support of the younger artist. [118] As well as these Glasgow subjects, Bone created an impressive body of graphic work in London recording the destruction caused by the bombing raids during the Blitz. Large and detailed drawings such as St. Bride's and the City after the Fire, 29th December, 1940 (1941) **[Fig. 29]** share a direct lineage with earlier architectural subjects, for example, Building (1904) **[Fig. 21]** and A

Manhattan Excavation (1923-28) [**Fig. 30**], in the powerful unity Bone creates between details of construction and overall design.

The B.W.M.C.'s work continued well past the war years, as did Bone's own involvement with it, as is evidenced by his letter to ffoulkes, 14 August 1924, concerning Stable-time at the Wagon Lines, France by the Vorticist artist, William Roberts. There Bone writes: "Robert's work is always interesting I think, and this is a real reminiscence of his soldier life in France. Even his odd way of putting things will have a historical as well as an art interest in the future!" [119] Such evidence reinforces the sense of commitment Bone obviously felt to artists who were among the most advanced stylistically in Britain, as well as demonstrating that as much as six years after the war had ended, Bone was still working towards creating a good artistic record of wartime.

CONCLUSION

It is clear that Bone maintained in his graphic work a thorough commitment to engineering and industrial subjects throughout much of his career. His chief interest in terms of this thesis is based on his position of eminence at a time of transition in British art between a Victorian narrative aesthetic and new developments towards Modernism. Bone is a product, certainly, of the former yet can be positioned much more closely to the latter movement than has previously been attempted.

No real attempts have been made by writers to establish exactly why Bone responded to scenes of modern industry and, more particularly why he concentrated on construction and demolition subjects. Some awareness of Geddes over the period 1900-1914 may have been influential, and certainly Bone's attention to transition within a city provides a strong parallel between the two. The obvious enthusiasm felt by Bone towards the urban change occuring in Victorian Glasgow and Edwardian London is important but hardly seems adequate to explain the very significant percentage of building subjects in Bone's ouevre. To date, only one tentative notion has been forwarded on Bone as to the relevance of this subject. In exhibition catalogue introduction to Muirhead Bone, 1876-1953, the author, Robin Tanner, suggests that "He sensed the way in which bricks and mortar both contain and express human experience. In the construction and demolition of buildings he identifies human aspirations and failure." [120] Bone is as reticent in what writings are available on emotive ideas as he is on those of the intellect, and Tanner has no tangible support for his statement, yet

he rightly tries to seek out a more universal, generalised theory why these type of subjects should be so dominant.

Perhaps Bone's early experiences of the city and the way in which it constantly seemed to be in a state of flux, gave rise to both feelings of enthusiasm at visible progress, as well as more reflective concerns with the idea of the transitory nature of society and its environment. Bone says little to substantiate this yet his concentration on these subjects needs further explanation. It may in part represent a transition between a nineteenth-century interest in the symbolic aspect of construction, based on his early interest in Meryon, and a more forward-looking aesthetic concerned with process, change and the progressive spirit.

In this connection, it was identified at an early stage in Bone's career that construction and demolition sites marked no easy place in the etching market, and may possibly have worked against him. Frederick Wedmore, writing on Bone for the Art Journal, 1909, comments that in choosing these subjects Bone's reputation had been

> "rather delayed than advanced through his selection of his themes...they...must have appeared to many as the proof of a wearisomely obstinate dodging of the steps of the "house-breaker", of an undue devotion to every form of scaffolding, simple and small, or vast and intricate, and of a mania for waiting upon the dissolution of buildings which have had there life and history..." [121]

Wedmore chooses to interpret these subjects as melancholic, but significantly does identify the fact that Bone was largely alone in concentrating so singularly on these scenes. James Caw in his major

history on Scottish art, also places him in a Whistlerian, nineteenth-century context, citing the poetic spirit "...in the romantic drawings of modern cities by Muirhead Bone." [122] Caw continues: "That they were so expressive of the moods and emotions evoked by a great hive of industry was due in large measure of course to pictorial treatment and significant technique." [123]

Bone did move away from these type of subjects after the First World War, but it would be wrong to suggest there was a clean break into new areas. In 1925, he published illustrations to his brother, James', book The London Perambulator, which, although including hardly any industrial subjects, does include one image, London, N.W. (or St. John's Wood) **[Fig. 43]**, a strikingly sparse view of a railway cutting with train smoke rising from the bottom edge. In its sense of dislocation and modern composition it would seem to anticipate the urban subjects of Edward Hopper. [124] Even after Bone had stopped producing original etchings, drypoints and lithographs he was still exhibiting industrial and urban subjects in, for example, the Royal Academy and other artists would have seen his work there. Between 1939 and 1948 he exhibited Building the "Queen Elizabeth" John Brown's Yard, Clydebank (chalk, No.938, in 1939); Railway Sheds, Marseilles (drypoint, No.511, in 1942); Piccadilly Circus - 1915 (drypoint, No.809, in 1943); Repairing the bombed viaduct, Southern Railway, Brighton (chalk, No.1006, in 1946); Whitehall from a room in the Admiralty (chalk and pastel, No.1016, in 1948).

Equally, it should be stated that throughout Bone's career he had executed rural and picturesque scenes entirely absent of industrial

references, for example, Gartloch, near Glasgow (1899, etching and drypoint), Canal and Bridge of S.S. Apostoli, Venice (1916, drypoint) and A Spanish Good Friday, Ronda (1925, drypoint). This continued after the First World War, no doubt influenced too by his traumatic experiences and overwork he was subjected to during his employment as Official War Artist. It cannot be surprising that his pre-War concentration on demolition and reconstruction subjects, which formed a major basis for his War work, was challenged. This co-incided with the dramatic decline of Futurist and Vorticist enthusiasms for the machine age and a reworking of the machine aesthetic in that post-War period.

Bone, soon after the war, went to the United States where, in producing Manhattan Excavation (1923-8) **[Fig. 30]** and similar subjects such as A Skyscraper (unfinished, 1923) shows that he was willing to follow the spirit of positivism evident in London and Glasgow at the turn of the century, to the American Continent of the 1920s. Here new architectural structures were only just beginning to be built, coming to symbolise one aspect of twentieth-century modernism and Bone shows something of his earlier enthusiasm in his treatment of this subject. The positivism of American industrialisation, with specific reference to skyscraper construction in Manhattan, is highlighted in the following passage, written by an American, Colonel W.A. Starrett, in the year Bone finished A Manhattan Excavation: "Nations and civilisations may rise and fall and historians of the far distant future may say that we were not many things that we now think we are, but one thing is certain: they will of surety say that we are a nation of builders, great builders, the greatest that the world has ever seen." [125] It is not at all certain that Bone would have

agreed with this sentiment, given his acute awareness of the constructional achievements in Britain, but the passage illustrates the type of enthusiasm which Bone now rightly located in the United States.

His concentration on industrial subjects from his earliest work such as The Dry Dock, his London period as represented by The Great Gantry, Charing Cross Station, his war work such as Shipyard seen from a Big Crane and his post-war work, for instance, A Manhattan Excavation, collectively demonstrate that he maintained a rigour and linearity in his art over his career that became particularly relevant when the Vorticists, spurred on by European Cubism and Futurism, discussed it as an issue in the visual arts. As Richard Cork wrote, regarding the arguments between T.E. Hulme and Wyndham Lewis on the nature of Vorticist art:

> "Hulme disagreed with Lewis's argument in 'The Cubist Room' essay that such an art arose directly from the twentieth-century environment. This seemed to him a superficial 'materialist explanation', and he countered it with the theory that the urge for abstraction originated in the modern artist's spiritual needs. 'Pure geometrical regularity gives a certain pleasure to men troubled by the obscurity of outside appearance. The geometrical line is something absolutely distinct from the messiness, the confusion, and the accidental details of existing things." [126]

This issue can be seen as central to Bone's concerns, in that he made the transition from a 'romantic' art of drama, complexity and confusion to one where the artist seeks an order, through geometry, behind the outward appearance of modern experience. Whilst much of Bone's industrial imagery exploits the technical mastery of detail and complexity, he is clearly not promoting a visual anarchy, but developing the idea through his art of an order behind industrial experience, to which the artist responds. Even

though in his promotion of mood and atmosphere through the media of printmaking and drawing, Bone is hardly seeking to compete with the "pure geometrical regularity" identified by Hulme as central to the Vorticist aesthetic. The hard-edged, machined quality in Bone's work is understated in his technique which never fully lost the influence of Whistler, Piranesi and Meryon. It was for the younger artists of a younger generation to pursue a more extreme interpretation of the machine aesthetic.

Finally, it is possible to draw a comparison between Bone's constant return to the subject of demolition and construction and Eduardo Paolozzi's constant use of deconstruction and reconstruction, often based on the figure, which inspires much of the latter artist's method (see Part Two, Chapter 7). Both artists focus on the visual appearance of industry and engineering and often concentrate on the way objects of industry are taken apart and reconstituted. For Bone, this involves representing buildings at certain stages of their history. From an ideological standpoint, Bone's art reflects a positive philosophy in regard to industrial endeavour in the city. Paolozzi, being of a later generation, is located within a more ideologically sceptical tradition, certainly less positive regarding society's position towards industry and science, and uses a more abstract means to articulate this. Paolozzi has developed the practice of deconstruction and reconstruction from a methodological point of view, that is in the way in which he actually produces art rather than as representational images of deconstruction and reconstruction as in the work of Bone. A firm historical link between the two figures remains unsubstantiated, yet the two artists share important approaches in the context of industrial subject-matter.

NOTES
Part Two, Chapter 2. Muirhead Bone

1. It should be noted here that another major figure in the British etching revival was D.Y. Cameron (1865-1945), whose oeuvre, whilst certainly not dominated by industrial or urban subject matter to the same extent as Bone's, nevertheless contains etchings of interest to this theme, for example The Smithy (1896), Greenock No.2 (1890), Robin's Court (1907) and The Clyde Set (1889), directly influenced by Whistler's Thames Set. The Smithy in particular is a precedent for Muirhead Bone's Denny's Old Workshop, Dumbarton (1900) but, partly due to Cameron's use of etching rather than Bone's use of drypoint, the effect is much cleaner, more analytical and largely devoid of a sense of active space in which men work. It is a detailed study, rather, of the blacksmith's environment and work tools as objects. Cameron is particularly well-known for his landscape subjects of the Scottish Highlands rather than industrial subjects.

2. J. Laver, The History of British and American Etching, London: Ernest Benn, 1929, p.84

3. "Signs of the Times", (1829), Thomas Carlyle. Selected Writings, Harmondsworth: Penguin, 1971, p.64

4. Bone - MacColl correspondence, 17 Oct, 1901. Glasgow University Special Collections, (B363).

5. Muirhead Bone, "From Glasgow to London", Artwork, No.19, 1929, p.146

6. Ibid., p.146

7. Ibid., p.151

8. "Talks with Great Scots. No.4. Muirhead Bone", Scotland, Spring, 1937, p.17

9. C. Baudelaire, "The Salon of 1846: On the Heroism of Modern Life", in Modern Art and Modernism. A Critical Anthology, (F. Frascina and C. Harrison, eds.), London: Paul Chapman, 1988, p.18

10. "Talks with Great Scots", op. cit., p.17

11. "From Glasgow to London", op. cit., p.151-2

12. There was also a close relationship between Meryon and Baudelaire, discussed in William Aspennall Bradley, "Meryon and Baudelaire", Print Collector's Quarterly, Vol.1, 1911, New York: Frederick Keppel.

13. C. Baudelaire, in Art in Paris, 1845-1862, (J. Mayne, trans. & ed.), London: Phaidon, 1964, p.200

14. Ibid., p.200-1

15. Ibid., p.201

16. "From Glasgow to London", op. cit., p.145

17. R. Tanner, Muirhead Bone, 1876-1953, London: Garton and Cooke, 1984, p.6

18. W. Scott Harrison, "The R.S.A., 1930", The Modern Scot, Vol.1, No.2, Summer, Dundee: James Whyte, 1930, p.43-4

19. The Yellow Book, Vol.V, April 1895, London: Mathews and Lane.

20. J. Davidson, "Greenock", from A Ballad in Blank Verse of the Making of a Poet, (1894), in John Davidson. A Selection of his Poems, (M. Lindsay, ed.), London: Hutchinson, 1961. A connection with and interest in Davidson continues with Hugh MacDiarmid, discussed in Part One, Chapter 4, who wrote an introductory essay for this book.

21. The drawing is deposited in the British Museum [1949-4-11-13], but does not name the 'Nebraska', suggesting that this identification in the final work should not be taken as certain.

22. Cited in Mayne, op. cit., p.220

23. Katherine A. Lochnan, The Etchings of James McNeill Whistler, New Haven and London: Yale University Press, 1984, p.81

24. "From Glasgow to London", op. cit., p.145

25. Campbell Dodgson, The Etchings of James McNeill Whistler, London: The Studio, 1922, p.12

26. "From Glasgow to London", op. cit., p.146

27. Ibid., p.146

28. With notes on Glasgow by A.H. Charteris. Glasgow: James Maclehose and Sons, 1911

29. Patrick Geddes, "Civics. As Concrete and Applied Sociology, Pt.II", (23 January, 1905), in The Ideal City, (Helen Meller, ed.), Leicester: Leicester University Press, 1979, p.158

30. "Talks with Great Scots. No.4. Muirhead Bone", op. cit., p.16

31. C. Harrison, English Art and Modernism 1900-1939, London: Allen Lane, 1981, p.49-50

32. This precise work has not been identified, however Peter Trowles notes a completed commission under the title Belgrave Hospital, Kennington in 1902 [Peter Trowles, Muirhead Bone: Portrayer of Modern Life, Glasgow. The Formative Years, M. Litt., University of St. Andrews, 1987, p.57]

33. Bone - MacColl correspondence, 16 December, 1901, G.U.S.C., [B 366], n.p.

34. Ibid., 17 October, 1901, [B 363], n.p.

35. Ibid., 20 November, 1901, [B 365], n.p.

36. Ibid., n.p.

37. Architectural Review, July 1905, cited in R. Banham, op. cit., p.46-47

38. Laver, op. cit., p.86

39. "From Glasgow to London", op. cit., p.151

40. See William Aspennall Bradley, "Some Meryon Drawings in the MacGeorge Collection", Print Collector's Quarterly, Vol.7, No.3, October 1917. In 1916, however, the collection was acquired by the dealers Messrs. P. and D. Colnaghi and Obach, London and subsequently dispersed to buyers in the U.S.A. [Ref. Harold, J.L. Wright, preface to Catalogue Raisonné of the Etchings of Charles Meryon, by Loys Delteil, New York, Winfred Porter Truesdell / London: P. & D. Colnaghi, 1924

41. P.G. Hamerton, Etching and Etchers, London: Macmillan, 1876. In his 1929 article "From Glasgow to London", Bone cited his discovery of etching to around 1898 when he read Hamerton's Etching and Etchers, which, he noted included shipyards and harbour scenes [op. cit., p.152].

42. Hamerton, op. cit., p.174

43. Ibid., p.216

44. The dialectic entered into here by Bone through his interest in contrasting very different periods of architecture recalls James Nasmyth's observations in 1830 on the evocative power of the "architectural remains" of Dudley Castle in the Black Country: "Their melancholy grandeur is rendered all the more impressive by the coal and iron works with which they are surrounded- the olden type of buildings confronting the modern.", [James Nasmyth, Engineer, an Autobiography, (Samuel Smiles, ed.), London: John Murray, 1883, p.165]

45. Bone - MacColl correspondence, 17 October, 1901. op. cit., [B 363]

46. If Piranesi's *Carceri* etchings can be viewed as chiefly romanticising in appearance, it should be made clear that this did not rely on notions of 'the natural' usually associated with Romanticism. The fact that this was a specifically man-made environment was identified from an early stage, for example Thomas de Quincy in 1821 noted that "Some of them...represented vast Gothic halls, on the floor of which stood all sorts of engines and machinery..." [The Confessions of an English Opium Eater, reprinted Harmondsworth: Penguin, 1971, pp.105-106, quoted in Macdonald, op. cit., p.10]. Members of Piranesi's family had been involved in the construction and engineering industries, indeed when he was in Rome he was a close friend of the Scottish engineer and architect Robert Mylne [ref. Macdonald, op. cit., p.18] Through his interest in engineering, no doubt expanded and encouraged by Mylne, Piranesi explored the visual effects of engineering as a discipline.

47. As Robin Tanner writes, in Muirhead Bone, 1876-1953 as an entry for a 1905 pencil, charcoal and chalk drawing used for the final version of Demolition of St. James's Hall, Interior: "This fine work ranks with the great finished drawings whose reproduction in newspapers contributed much to the spread of Bone's reputation." (op. cit., p.16) Bone's work was receiving a high degree of circulation increasing his profile and other artists' awareness of his work gained through newspaper reproduction. This factor may have had a beneficial effect regarding Bone's subsequent application for employment as a war artist, in that his work had already proved its suitability for mass reproduction as that provided by newspapers, an important outlet for propaganda material during the First World War.

48. For a discussion of Adolf von Menzel, see Edward Lucie-Smith, and Celestine Dars, Work and Struggle. The Painter as Witness 1870-1914, London and New York: Paddington Press, 1977.

49. Macdonald, op. cit., p.22

50. Although it has been argued that they have been based on grid-planned ancient Roman cisterns, or in one case, the *Carceri* IX, perhaps based on the Tullianum, a prison from the Roman Republic [ref. Macdonald, op. cit, p.17-18].

51. T.E. Hulme, Speculations. Essays on Humanism and the Philosophy of Art, (Herbert Read, ed.), London: Routledge and Kegan Paul, 1924, p.104

52. "From Glasgow to London", op. cit., p.146

53. "Talks with Great Scots", op. cit., p.17

54. J. Mayne, The Salon of 1859, op. cit., p.200-1

55. F.T. Marinetti, "The Foundation and Manifesto of Futurism," (1908), originally published in *Le Figaro*, (Paris. 20 February, 1909). In Theories of Modern Art, (Herschel B. Chipp, ed.), Berkeley: Univerisity of California, 1968, p.284

56. Bone - MacColl correspondence, 20 November, 1901, op. cit., [B 365].

57. R. Cork, Vorticism and Abstract Art in the First Machine Age, 2 vols., London: Gordon Fraser, 1976, p.3

58. Ibid., p.4

59. Ref C.R.W. Nevinson, Paint and Prejudice, London: Methuen, 1937, p.40

60. R. Cork (1976), op. cit., p.229

61. Bone - MacColl correspondence, 14 May, 1915, op. cit., [B371]

62. Stuart Sillars, Art and Survival in First World War Britain, London: Macmillan, 1987, p.144

63. Campbell Dodgson, Etchings and Drypoints by Muirhead Bone, Vol.1, 1898 - 1907, London: Obach & Co., 1909, p.12

64. Ref. Meirion and Susie Harries, The War Artists. British Official War Art of the Twentieth Century, London: Michael Joseph, 1983, p.74

65. A fact cited in British Prints, 18th - 20th Centuries, London: Campbell Fine Art, 1988, Entry No. 98

66. Sue Malvern. "'War As It Is': The Art of Muirhead Bone, C.R.W. Nevinson and Paul Nash, 1916-17", Art History, Vol.9, No.4, Dec.1986, p.492. This opinion is largely followed by Stuart Sillars, op.cit., p.20

67. Malvern in "War as it is...", notes new problems though in the transition from the artist-illustrator represented by Bone to the fine-artist on the Front: "The work of these younger artists [Nash, Nevinson, Kennington], which was less dependent on observation and the literal transcription of appearances, made the relationship of war art to photography less problematic but compounded the issue of specialism versus popularisation.", Art History, op.cit. p.498

68. D. Macmillan, Scottish Art 1460-1990, Edinburgh: Mainstream Publishing, 1990, p.306-7

69. S. Sillars, op.cit., p.4

70. Bone - Yockney correspondence, 23 Nov. 1917, Artists at the Front. Muirhead Bone, 1918, Vol.2, G4010/27, Imperial War Museum

71. Bone - ffoulkes correspondence, 31 March, 1929, Muirhead Bone, Feb.1928-Dec. 1935, 42A/2, I.W.M.

72. Harries, op.cit. p.11

73. Masterman - Lieut.-Colonel Hutton Wilson, 1 May, 1917, Artists at the Front. Muirhead Bone, 1916-17, Vol.1, G4010/27, I.W.M.

74. The relevant correspondence, from R.V. Vernon, states: "...I am directed by the Minister of Munitions to say that he [Bone] agrees to drawings being made of suitable subjects in connection with the manufacture of munitions...I am to enclose a permit which will secure Mr. Muirhead Bone admission to all munition factories..." R.V. Vernon - Gowers correspondence, 10 Jan 1917. From the Ministry of Munitions of War. Artists at the Front. Muirhead Bone, 1916-17, Vol.1. G4010/27, I.W.M.

75. Chetwynd - Nicholson correspondence, 26 Jan 1917, ibid.

76. Bone - Gowers correspondence, n.d., ibid.

77. Bone - Gowers correspondence, 1 March, 1917, ibid.

78. Bone - MacColl correspondence, G.U.S.C., B 372

79. For instance, ref. J. Hinton, Rank and File Militancy in the British Engineering Industry 1914-1918, Ph.D., University of London, 1969

80. Earliest contact might have come through The Yellow Book to which Peter Trowles records Pennell as having contributed, [M.Litt. 1987, op. cit., p.50]

81. Bone - Gowers correspondence, 1 March, 1917, Imperial War Museum, op. cit.

82. Cited in Harries, op.cit., p.11

83. One of Pennell's most ambitious projects was his recording of the work undertaken constructing the Panama Canal. He wrote stating his reasons for doing this massive subject: "I went to the Panama Canal because I believed the greatest engineering work the world has ever seen would give me the greatest artistic inspiration in my life." [Louis Wuerth, Lithographs of Joseph Pennell, 1931, p.82, cited in Jane Allinson, Prints and Drawings by Joseph Pennell 1860-1926 exhibition catalogue, Davison Art Center, Wesleyan University, Conn., May 1979] His notes made to accompany the images reproduced in the Print Collector's Quarterley article "Joseph Pennell's Lithographs of the Panama Canal" [Vol.2, October 1912] show with little ambiguity his positive attitude towards industrial subjects. He writes: "Work - realistic work - has been the inspiration of the greatest artists," [Ibid., p.291] who he identifies as Rembrandt, Whistler, Millet, Claude, Turner, Piranesi, Meryon and Meunier. He continued: "These great artists have not posed as preachers or prophets, but they have shown that great work, being carried out in great masses, great lines, make great subjects." [Ibid., p.292] His keyword was the word "work", usually prefixed by the term "the wonder of". The grand scale of the construction finds close parallel in the construction of the Forth Rail Bridge, with Pennell's persistance amongst the site to make his positive images similar to the efforts of Evelyn Carey. Indeed, Pennell refered to his lithographs of the Panama Canal as "a record of the greatest American achievement of all time." [Ibid., p.315] Much of his work concentrates on the massive locks which controlled the flow of water at different points along the canal, for example, the lithographs Approaches to Gatun Lock, The Guard Gate, Gatun Lock and The Bottom of the Pedro Miguel Lock.

84. Introduction to Catalogue of an exhibition of lithographs of war work in Great Britain and the United States by Joseph Pennell, Washington: Washington Government Printing Office / Smithsonian Institute, United Stated National Museum, 1917, p.3

85. Ibid., p.4-5

86. Ibid., n.p.

87. The text opposite Plate 67, in Muirhead Bone, The Western Front, Vol.1, (intro. by General Sir Douglas Haig, annotated by C.E. Montague), London: The War Office, 1917.

88. Adventures of an Illustrator, Boston: Little Brown, 1925, p.46

89. The Graphic Work of Joseph Pennell, Washington: George Washington University, 1985, n.p.

90. Bone - Yockney correspondence, undated. Artists at the Front. Muirhead Bone 1918, Vol.2, G4010/27, I.W.M.

91. Bone - Yockney correspondence, 23 November, 1917, ibid.

92. Bone was not the only artist commissioned to work on Scottish munitions. Most notably, the Glasgow artist, Frederick Farrell (1882 - 1935), made extensive records of munitions work in Glasgow. Drawings include National Projectile Factory (pencil and chalk, 1918, Glasgow Museums), Forging Shell Noses (pencil, watercolour and chalk, 1917, Glasgow Museums), Banding Six Inch Chemical Shells, N.P.F., Cardonald (pencil and chalk, 1918, Glasgow Museums), and Forging Big Guns at Beardmores (chalk, 1918, Glasgow Museums).

On the same subject, shortly after the War, in 1924, the English artist Frank Mason produced a series of highly accomplished etchings, under the title "Impressions of the Works", commissioned by W. Beardmore and Co. Ltd. Subjects included Parkhead Forge, Parkhead Foundry, Locomotive Building, Dalmuir, Rolling Armour Plate, The Basin, Dalmuir and The Ships, Dalmuir, and were reproduced in a Bearmore souvenir booklet for the British Empire Exhibition, 1924.

93. Historians of this period differ as to the extent to which Clydeside was in reality on the verge of revolution. The affirmative view is held by Dickson: "Clydeside, and in particular the C.W.C. [Clyde Workers' Committee] and its supporters, constituted a real challenge to the prevailing hegemony in two directions. First, they disputed the subordination of labour interests to the war policies of British imperialism. Second, together with similar movements in England, they opposed the trend toward beaurocratic centralism in trade union organisation reflected in the central direction of activity by leaders already effectively incorporated into the state machinery during the war...//That the Government saw the Clyde as its most important challenge is illustrated by its rapid reaction in 1916 and 1919 to use direct coersion to crush resistance..." [Scottish Capitalism. Class, State and Nation from before the Union to the Present, London: Lawrence and Wishart, 1980, p.277] Iain McLean in The Legend of Red Clydeside [Edinburgh: John Donald, 1983], sees unrest on the Clyde as primarily based on industrial rather than political issues, chiefly centred on the issue of Dilution, which involved the employment of semi-skilled workers to take the place of or work alongside highly skilled ones. Due to this need for vastly increased output women were also employed in the type of work previously only done by men. Both these incursions into previously skilled male-dominated areas is seen by McLean as the provocation for industrial unrest, rather than any inclination towards the type of widespread, theoretically-inspired revolution on the lines of the 1917 Russian Revolution.

94. S.G. Checkland, The Upas Tree. Glasgow 1875-1975 (1976), Glasgow: Glasgow University Press, 1981, p.9-10

95. Scott and Cunnison, The Industries of the Clyde Valley During the War, Oxford: Clarendon Press, 1924, p.102

96. For example, ref. a cabinet memorandum by McKinnon Wood, 17 Nov. 1915: "I understand that the Minister of Munitions attaches considerable importance to the agitation as contributing to the unrest which exists throughout the Clyde districts, where...labour difficulties have caused him much anxiety." C.A.B. 37/137 no.29, quoted in McLean, op. cit., p.23

97. McLean, op. cit., p.83-4

98. Bone - Masterman correspondence, 27 March, 1917, Artists at the Front. Muirhead Bone, 1918, Vol.2. G4010/27, I.W.M. Masterman registers Bone's need for a break in a letter to Hutton-Wilson, 16 June, 1917: "A number of his friends and admirers are telling me that I am working him to his death in a way that is not really fair to his genius, so I think I shall give him a fortnight off before he comes back to draw the aeroplanes and the air service." [Masterman - Hutton-Wilson correspondence, ibid.]

99. "The Great War: Britain's Efforts and Ideals depicted by British artists", The Studio, Vol.71, p.117

100. Sillars, op.cit., p.59

101. Ibid., p.59

102. The Efforts and Ideals series consisted of two groups of works, contrastingly realistic and symbolic, by various British artists. The Ideals were 10 allegorical lithographs by artists including William Nicholson, Charles Ricketts, Augustus John, William Rothenstein, George Clausen and Frank Brangwyn (these last three also producing work for the Efforts half.) Subjects for the Ideals section included, for example, The Rebirth of the Arts by Charles Shannon, which features an angel rising to meet a rainbow amongst the aftermath of a battle. These were intended to be inspirational and allegorical whereas the Efforts were a series of drawings by each artist "illustrative of the British Effort against the Enemy" [British War Memorials Committee, file 43/2 Part II, I.W.M.] and contained 1. The Making of a Sailor by Frank Brangwyn 2. The Making of a Soldier by Eric Kennington 3. The Making of a Big Gun by George Clausen 4. The Building of a Ship by Muirhead Bone 5. The Medical Services by Claude Shepperson 6. Agriculture by William Rothenstein 7. Women's Services by A.S. Hartrick 8. The Work of the Mercantile Marine by Charles Pears 9. Aircraft by C.R.W. Nevinson. There were 200 signed impressions of each on sale throughout its extensive tour to London, New York, Paris, Copenhagen, Stockholm, Amsterdam and others.

103. It should be noted that the final choice and order for The Clyde Series was not finalised until sometime during or after 1919, as a letter, possibly from Yockney, to Bone's dealers, Colnaghi and Obach, gives The Clyde Series as "1. Building a Cross Channell [sic] Train Ferry - underneath the bows 2. Putting an Oil Tank into the Train Ferry 3. The Floor of the Train Ferry 4. Reconstructing a Clyde shipyard 5. The Tuscania at Glasgow 6. Building a Liner at Grenock [sic]" [25, January, 1919. Papers from the British War Memorials Committee, 41/2, I.W.M.]

104. The Western Front, Vol.2, op. cit., n.p.

105. Malvern, "War as it is..", op. cit., p.493-4

106. Harries, op.cit., p.75

107. Daily Mirror, 3 July, 1916

108. David Bone, Merchantmen-at-Arms, London: Chatto and Windus, 1919, illustrations p.15 and p.157 respectively.

109. See the account given in Yockney - Norris correspondence, 23 December, 1918. Papers of the British War Memorials Committee, 43/2. I.W.M.

110. Harries, op.cit., p.88

111. Ibid., p.90

112. Ibid., p.112

113. Ibid., p.39

114. Ibid., p.9

115. All these paintings are held by the Imperial War Museum, London. It is not proposed to discuss these paintings in detail, as Spencer, being an English artist following his own very specific concerns in these paintings, lies somewhat outside this thesis' scope. Reference is made to them, however, in Part Two, Chapter 6, Politics and Painting in Glasgow after 1940. A detailed analysis of these paintings appears in Spencer in the Shipyards, London: Arts Council of Great Britain, 1981.

116. Richard Carline, Spencer at War, London: Faber and Faber, 1978, p.46

117. Ibid., p.95

118. See Harries account, op. cit., p.208-9

119. Bone - ffoulkes correspondence, Papers from the British War Memorials Committee. Muirhead Bone Fund, 43/2, I.W.M. Note that in 1924, William McCance moved in to a flat he shared with William Roberts (see Part Two, Chapter 4).

120. R. Tanner, Muirhead Bone, 1876-1953, op. cit., p.1

121. F. Wedmore, "Muirhead Bone", Art Journal, 1909, p.225

122. J. Caw, Scottish Painting Past and Present, 1620-1908, Edinburgh: Jack, 1908, p.485

123. Ibid., p.461

124. London, N.W. is illustrated opposite p.56, James Bone, The London Perambulator, London: Jonathan Cape, 1925.

125. Colonel W.A. Starrett, Skyscrapers and the Men Who Build Them, New York and London: Charles Scribner's Sons, 1928, p.2. For other examples of artists who have been inspired by the American skyscraper, ref. Merrill Schleier, The Skyscraper in American Art, 1890-1931, Ann Arbor, MI: U.M.I. Research Press, 1986

126. R. Cork, Vorticism and its Allies, London: Arts Council of Great Britain, 1974, p.14

PART TWO: Chapter 3

J.D. FERGUSSON AT PORTSMOUTH DOCKS

In 1939 Fergusson had prepared his Modern Scottish Painting, published four years later, in 1943. Yet its central chapter in the context of the analysis here, entitled "Art and Engineering", anteceded by over twenty years a group of works germain to the subject. These were a group of paintings of the docks at Portsmouth during the First World War.

There do exist in Fergusson's earlier formative experiences various contacts with industry which may be relevant. Margaret Morris, in her biography, relates an early holiday in the Highlands where Fergusson, as a boy, was brought into contact with local, small-scale industry:

> "Besides the sawmill where Fergus spent many hours, he would visit a smithy and watch the sparks fly as horses were shod. Again it was the visually dramatic picture that thrilled him, the blazing fire and red-hot irons against a dark background, and lurid light on smith and horse. But he also liked to talk to the smith, who had a fund of wisdom and made such a deep impression on the small boy that sixty years later he would still talk of it and quote actual phrases." [1]

Another earlier experience which may have drawn him to these subjects is his early life in Leith, near Edinburgh, one of Scotland's major docks. A child's impression of the large vessels stationed at Leith may have encouraged Fergusson in his enthusiasm for the Portsmouth Docks. In

this he shared a similar early experience to Paolozzi, also born in Leith (see Part Two, Chapter 7). Contact with the navy continued when he left school to become a naval surgeon around 1891, a pursuit he gave up around 1894. In part, then, Fergusson may have been seeking a romantic subject in a seemingly mundane environment at Portsmouth Docks. As he wrote in Modern Scottish Painting, "...there are people who are not prevented by the accumulation of the past, from seeing romance in the present." [2] These early insights into industry may give some context to the later paintings of the First World War.

Curiously, Fergusson does not refer directly to the series of paintings he produced in Portsmouth Docks of 1918 in "Art and Engineering". Fergusson was invited to undertake this subject as part of the Ministry of Information's employment of artists to produce images for the war effort. Fergusson was the first British artist to show the influence of the Fauvists (from around 1906 onwards), and the Ministry of Information would not normally prioritise semi-abstract work if it lessened the primary function of recording and celebrating the war effort. [3] Therefore, it was probably only on the recommendation of Muirhead Bone that he was employed by this government office, and his appointment meant that he was one of the most advanced Modern artists employed for war work. This may explain, however, why Fergusson was not used extensively. Harries records that, "...the Fauvist Fergusson was offered Scheme 3 as a kind of probation." [4] The probation period may not have been a success in the eyes of the Ministry of Information as none of Fergusson's work was purchased. [5] Significantly, though, Harries records the artist saying that he found an

inspiration there "which I have not had before in my work." [6] This gives strong evidence regarding Fergusson's seriousness in tackling this industrial environment, a fact not usually registered in conventional biographies. (The Imperial War Museum did buy Portsmouth Docks much later, in 1975, almost sixty years after it was painted. [7])

Fergusson spent the war years between London, Edinburgh and France. He was not called up until 1918, but the writer and critic P.G. Konody suggested employment as a war artist to avoid service. [8] Morris records that in an interview at the War Office, Fergusson intimated that he, "would like nothing better than to do paintings of the shipyards and battleships. The colonel said they would arrange this and they parted on the best of terms. In July Fergus was to go to Portsmouth as a war artist." [9] On 30th July, 1918 Fergusson wrote to Morris from Portsmouth: "I go round the docks with the Commander man again today. We went round in a boat yesterday and it was very fine indeed to paint, but takes a bit of time to select, of course." [10] The next day he wrote to his wife, "...everything is going well with me. I went round and saw everything and fixed on several splendid things - one in particular - and its [sic] arranged that I start work at once." [11]

Clearly, Fergusson tackled his subject with enthusiasm and there is no hint from these letters that Fergusson felt restricted in his choice of subjects, the indications being that he was given some freedom. Although it has been stated above that there existed in Fergusson's earliest experiences a context for shipping and general industrial subjects, it is

certainly true that his pre-War work had no connection with the modern subjects which were part of the Portsmouth commission, so close as it was to contemporary French art, such as that of Matisse and the Fauves. The main genres of European art, such as landscape, portraiture and still life provided the catagories for Fergusson's work up to that point, and continued to dominate after 1918. We must therefore be aware that this body of work lies to one side of the main direction of Fergusson's art, however central it was for a time.

Fergusson also had close contact with the members of the Vorticists before and throughout the First World War through a number of avenues. For example, his wife managed an artist's rendezvous in London called The Club, which was frequented by the Vorticists and their associates, such as Wyndham Lewis, Jacob Epstein and Ezra Pound. [12] Fergusson was a central participant in the extremely active period in the London art scene from around 1910 to 1914 which hosted major exhibitions of Futurism, the First and Second Post-Impressionist Exhibitions, and of Lewis and the Vorticists. Fergusson was associated with the publication Rhythm edited by John Middleton Murray. [13] The possibility exists too for contact between himself and Bone (then a member of the New English Art Club) in London, as fellow prominent Scots artists, although this connection remains speculative until the First World War when Bone suggested Fergusson for the Portsmouth commission.

It is important to analyse further the connections between Lewis and J.D. Fergusson in that they share concerns in regard to industrialisation and Modernism. Interest in the natural world as a subject and its

interface with the modern world is described by Lewis in point 4 of the fourth section of 'Manifesto II', where he states: "But our industries, and the Will that determined, face to face with its needs, the direction of the modern world, has reared up steel trees where the green ones were lacking; has exploded in useful growths, and found wilder intricacies than those of Nature." [14] The desire to translate the aesthetic of Cézanne into the modern world seems present here, and brings with it another shared interest with Fergusson. It is not at all unlikely that Fergusson, in his series of battleships in Portsmouth Docks was in turn influenced by Lewis, the most apt inspiration coming through Lewis's writings in Blast (1913-15). It is known that Fergusson's close colleague, S.J. Peploe, subscribed to and received both issues of Blast. [15]

It need not be assumed that influence was only one way, as a possibility exists that Fergusson's series on the shipyards in Southampton, whilst late in the War, influenced Lewis's own art, although that had now moved from Vorticism to figuration. Lewis's 1919 exhibition entitled Guns, at the Goupil Gallery, was his first one-person show and comprised work commissioned by the Canadian War Memorials Fund. The catalogue for this exhibition includes a short foreword by Lewis where he explains the move away from, "...those vexing diagrams by which he puzzled and annoyed." [16] It represents a more determined look at real life, rather than the development of a purely formal art language, which he implies made up the chief aim of pre-War Vorticism.

> "I have attempted here only one thing: that is in a direct, ready formula to give an interpretation of what I took part in in France. I set out to do a series dealing with the Gunner's life from his arrival in the Depôt to his life on the

> Line...attempts to give a personal and immediate expression of a tragic event. Experimentation is waived..." [17]

Yet he perceptively points out that all work done by artists during the War had still to deal with the larger questions about war which come in time after the event, stating that, "...it is certain that the philosophy of the War, all the serious interpretation of it, has yet to be done. That could not, for a hundred reasons, be accomplished during the War...Truth has no place in action." [18] Certainly, Muirhead Bone's difficulty in uniting action with art makes explicit Lewis's more general point. Of the fifty four works Lewis exhibited, many were of battalions at rest at or behind the Front Line, with a few directly looking at the machinery involved, for example, Study of a gun mechanism (cat.37). The exhibition did mark a most concentrated body of work concerned with the machine aesthetic. As John Rothenstein wrote: "Big guns in particular possessed the characteristics of power, hardness, purposefulness and unqualified masculinity, that marked his own temperament." [19] Other than the exhibition itself, we have little to go on to ascertain the extent to which these works were known to the artistic community of the time, and thus the extent to which they might have influenced other artists. Certainly Lewis and Fergusson share the same aggressive engagement with the problems of interpreting a modern subject within an avant garde visual aesthetic.

Looking in detail at selected works Fergusson did produce in Portsmouth shows how individually and refreshingly he responded to his commission.

Stylistically there are strong connections with other work around the same time but Fergusson's Fauvist-derived approach to painting industrial subjects is unique in the context of war artists commissioned by the Government.

The painting Damaged Destroyer, 1918 (1918) **[Fig. 44]** shows the destroyer from the quayside, looking through geometricised elements which may be based on crane foundations or similar constructions. Given Fergusson's abstracting style exact identification remains difficult. The destroyer itself occupies a narrow expanse of water, presumably awaiting repair. Fergusson's treatment of the only 'natural' element in the work, the water, closely follows Cézanne in his constructional use of brushstrokes. Fergusson's firm design and use of geometry is evident in his treatment of the boat, the arches, and the opposite side of the quay. (The trunk-like leaning arches in the foreground even echo certain tree forms by Cézanne, for example in The Bathers (c.1900-05).) Clearly the stacking of box-like forms owes much to Analytical Cubism. The prominent introduction of lettering, through the identification markings on the boat 'D21', makes a neat and humourous reference to Synthetic Cubism in its use of collage and newspaper type. This technique was also continued, more significantly, in the art of the Futurists and Léger who provide an appropriate point of reference for Fergusson's industrial subjects. The bow of the ship on the left hand foreground and the coil of rope in front of it is more openly painted than the rest of the work and may imply that the painting was not finished (although it is signed). There are red marks across the hull of the destroyer which may have been executed in that way to alert the viewer to the damage inflicted on the ship. Such a subject,

it should be observed, may have been somewhat negative in mood for Fergusson's commissioners during the final stages of the War and may explain why none of his works were bought by the Ministry of Information.

Another major painting in the series, entitled The Portsmouth Docks (1918) **[Fig. 45]** would seem to be later than Damaged Destroyer, 1918 in that it explores and develops spatial ambiguity to a much greater extent. The camouflaged bow of the ship to the right lists dramatically in the centre, as if to make way in the composition for the metal wheel which fills part of the top-left of the foreground. Other details such as a steel drum on the foreground quay, a rail signal and the distant view of the other side of the water are placed with some notion of a consistent pictorial space, yet is formally more radical than Damaged Destroyer, 1918.

Fergusson shares an interest in the ambiguity of spatial relations with major contemporary artists such as Delauney and Léger, who were clearly important precedents for Fergusson in treating this new, industrial subject. Delauney's The Eiffel Tower (1910) takes the engineering structure as its subject but diffuses any strictly explanatory use of line through strong colour. The simultaneity of viewpoints, employing close-up views of industrial subjects is also present in Delauney's The Three Windows, The Tower and The Wheel (1912). The highly-charged atmosphere which this high colour range instills in Delauney's work is translated by Fergusson to his Portsmouth paintings. Fergusson, in keeping with his Fauvist work up to that point, registers a positive note in these paintings not through propagandist interpretation of the subject to hand but through colour and strength of design.

As a Fauvist, it is natural to expect the introduction of heightened colour by Fergusson into subjects which would not in reality have always been colourful. Not surprisingly, links have been made between Fergusson's Portsmouth paintings and his earlier work. For example, Roger Billcliffe argues that, "The camouflage gives Fergusson an excellent basis for these patterns, which spread from the ships in to the backgrounds, as in the works of 1908-12." [20] Indeed, the use of camouflage on the hull of the battleships would have been perhaps the most striking characteristic for an artist such as Fergusson. Camouflage would introduce a sense of spatial ambiguity caused by breaking up the identifiable shape of the battleship. Although this was for highly practical reasons during the battles at sea, Fergusson no doubt responded to the artistic possibilities. This was also the case for Edward Wadsworth, who executed a well-known series of paintings and woodcuts based on ships' camouflage, for example, Dazzle-Ships in Drydock at Liverpool (1919). [21] Clearly, the two artists shared an awareness that the coloured surfaces of ships and the activity surrounding shipbuilding in general provided an environment which could be interpreted within a post-Cubist aesthetic based on abstraction and the abandonment of coherent space.

Fergusson's concentration on colour implies a certain emotional response to the visual impact which Portsmouth made on him. As he wrote in the chapter "Art and Engineering" in Modern Scottish Painting:

> "But about Art and Engineering, I submit that as a result of research in form (which cannot really be separated from colour) the artist can only make his research for form by *seeing*...This brings us to accuracy in form, and then we have to ask, accuracy for what, and we immediately realise that it has not even occured to most people that there is *emotional* accuracy,

and that all real precision is *emotional*, in other words human."
[22]

Even if Fergusson had his own work of the dockyard in mind at this point it is still impossible to tell whether he learnt of what he is writing directly due to the experience of Portsmouth or whether he had already reached a position similar to this before he painted these works. It is likely, nevertheless, that his use of colour in these works emphasised the emotional rather than functional intentions behind his work. Where, in Modern Scottish Painting he looks back to the roots of Modernism, he makes explicit the fact that a knowledge of the workings of engines was not a pre-requisite for artists impressed by their visual qualities: "...the point had arrived when an engine, or a piece of machinery being a composition in form, was a perfectly good source of inspiration for a composition of form in painting or sculpture, even if the artist was not an engineer and didn't know the 'anatomy' of engines." [23] This seems, in general, to be his attitude to the paintings he did in Portsmouth Docks.

As has been stated, Fergusson's synthesis of geometrical abstraction and high colour in the context of industrial subjects relates him closely to Léger. In *La Femme en bleu* (1912), for example, Léger juxtaposes geometrical shapes and mechanical details, all of which are pushed to the front of the picture plane. Fergusson's series also uses this approach. Contemporary with Fergusson's paintings, Léger was developing paintings which fused mechanical and abstract forms, such as *Les Disques* (1918) and *Les Deux Disques dans La Ville* (1919). *Les Deux Disques dans La Ville* also introduces small figures, giving a sense of scale to the mechanical shapes.

Fergusson uses figures in Dockyard, Portsmouth (1918) **[Fig. 46]** which perform the same function. In the context of Fergusson's work, his Portsmouth paintings show perhaps less of an inclination to destroy completely the effect of space and atmosphere in his subject compared to Léger. His depiction in Dockyard, Portsmouth of a crane which towers over the scene is highly dramatic, as he uses clouds which hang in front of the arm of the crane to indicate height. Extending to the height of the crane is the bow of a large ship which occupies the right hand side of the composition and overshadows the smaller ship on the quayside. Although there is a relatively logical depiction of space in Dockyard, Portsmouth, the artist has taken a number of steps to offset this. The pastel colours used to indicate shadow falling across the smaller ship deliberately hamper the reading of the funnel and ducts on the deck of the ship. The gang plank is indicated only summarily and does not recede clearly from the quay to the deck thus registering more as an independent geometric element intruding into the foreground of the composition. Fergusson introduces the same degree of abstraction into the unidentified brown framing element along the left hand side which tilts the whole arrangement. Considerable freedom, too, has been used to describe the anchor on the hull of the large ship, whose logic is even more disrupted with blocks of bright vermilion which seem to have no clear representational role. Thus, it is clear that, in rejecting a traditional mode of representation for this series, Fergusson approaches a very personal interpretation of a machine aesthetic either, whilst maintaining his deep-rooted interest in the work of Cézanne and the Fauves. The result is a complex Modernist fusion.

It seems that the actual subjects which Fergusson was engaged on at Portsmouth remain problematic regarding their importance for his future art, although already cited above by Harries is Fergusson's statement that he found an inspiration there "...which I have not had before in my work." It may therefore be misleading to infer any great commitment to these as industrial subjects as such. Fergusson discussed the issue of 'Content' in his Modern Scottish Painting:

> "...what did "but the content apart" mean. It suggested that there was a container and what it held was the content apparently meaning that we can accept the idea of a mould or receptacle, and what is put into it is what makes it art, whether a stationary engine, flying machine, wine bottle, railway train, steamer, submarine, elephant or snake; or that a building could be equally suitable for a blast furnace or a habitation if you got the right pattern. That the same mould, container, will do for all the new combinations is obviously absurd. So if content is something that is contained, then it seems to me that the work of art is not a container; that it does not contain, but is something that allows something to pass through to someone in sympathy." [24]

It may not necessarily be the case that Fergusson was applying this thinking to his Portsmouth work of twenty five years earlier, yet it seems to have an important bearing on this series. Fergusson was taking much of his previous experience to these subjects of battleships and submarines and in this respect his Portsmouth work can be seen in this overall context. Nevertheless, it is curious how often he cites industrial subject matter in the above passage to illustrate his point concerning content. In a short list he mentions a blast furnace, railway train, steamer, submarine and engine. If it is difficult to see Fergusson's Portsmouth series as indicating anything specific about the industrial experience, he does seem to adapt his style in order to interpret adequately this new subject. This

could be seen in the light of his comment in the above passage concerning his belief that, "...the same mould, container, will do for all new combinations is obviously absurd." He uses models which go beyond Cézanne for his battleship works, employing more appropriate ones in the manner of Delauney and Léger.

A relevant, though slightly later work, outwith the Portsmouth series is a conté crayon and watercolour entitled Tin Openers, (c.1918-20) **[Fig. 47]**. It continues some of the concerns of his experiments with industrial forms, being a depiction of four semi-abstracted tin-openers, interpreted in such a way as to stress their anthropomorphic characteristics. The cutting blades evoke heads and the handles resemble bodies. They also have a primitive, aggressive aspect, giving an ostensibly mundane subject a totemic presence. This work, alongside the Portsmouth series, may be considered the best examples of Fergusson seriously experimenting with a machine aesthetic and shows that his considerable confidence and understanding of European Modernism enabled him to encompass industrial subjects within the art of oil painting as well as any Scottish artist.

NOTES

Part Two: Chapter 3. J.D. Fergusson at Portsmouth Docks

1. Margaret Morris, The Art of J.D. Fergusson. A Biased Biography, Glasgow and London: Blackie, 1974, p.24

2. J.D Fergusson, Modern Scottish Painting, Glasgow: MacLellan, 1943, p.63-4

3. Meirion and Susie Harries, The War Artists, London: Michael Joseph, 1983, p.112

4. Harries, ibid., p.93. Scheme 3 is defined by Harries: "...in return for facilities the artist was to offer the first option on all the work he produced, at a 'reasonable' price (but transferring copyright only if the option was exercised): he would receive neither salary nor expenses." [Ibid., p.93]

5. Ibid., p.112

6. Ibid., p.112

7. Ibid., f.n.95, p.292

8. Margaret Morris, op. cit., p.127

9. Ibid., p.128

10. Ibid., p.129

11. Ibid., p.130

12. Ibid., p.102

13. Discussed in S.K. Tillyard, The Impact of Modernism. The Visual Arts in Edwardian England, London: Routledge, 1988, p.181-2

14. Walter Michael and C.J. Fox, Wyndham Lewis on Art. Collected Writings 1913-1956, London: Thames and Hudson, 1969, p.29

15. William Hardie, Scottish Painting 1837-1939, London: Studio Vista / Christie's, 1976, p.95

16. Guns, exhibition catalogue, February, 1919, London, unpaginated

17. Ibid., n.p.

18. Ibid., n.p.

19. In Jane Farrington, Wyndham Lewis, London: Lund Humphries, 1980, p.9

20. R. Billcliffe, J.D. Fergusson 1874-1961, Edinburgh and London: The Fine Art Society, 1974, unpaginated.

21. Ref. A Genius of Industrial England. Edward Wadsworth 1889-1949, (Jeremy Lewison, ed.), Bradford: Bradford Art Galleries and Museums, 1990

22. Op. cit., p.58-9

23. Op. cit., p.72

24. Op. cit., p.101

PART TWO: Chapter 4

WILLIAM McCANCE

The Scottish artist William McCance (1894-1970), worked as a printmaker primarily in England and Wales, after graduating from Glasgow School of Art in 1915. Throughout his career he maintained strong connections with Scotland, moving back in later years and becoming a vigorous proponent of nationalist ideals in art and politics, encouraged not least through his association with Hugh MacDiarmid. Many of his works of the 1920s and 1930s relate closely to his association with Vorticism and to the themes of modernisation and industry.

Born in Cambuslang, an industrialised area on the outskirts of Glasgow, on 6 August, 1894, he would have had formative impressions of industrial Scotland. This was reinforced by the fact that his father worked in factories and coal mines in the Ayrshire and Lanarkshire regions. [1] McCance trained at Glasgow School of Art from 1911 to 1915, when the Vorticist movement in London was at its peak. Given the widespread notoriety of the movement it is likely that McCance had at least a secondhand awareness of it, and as is demonstrated below, this movement was to represent the most important early influence. His attendance at Glasgow School of Art coincided with the Principalship of Francis Newbery, also Principal when Muirhead Bone was there.

Upon graduating, he undertook a teacher-training course at Kennedy Street School in Glasgow until 1916. Whilst there he met Francis George Scott, the composer and a friend of MacDiarmid. This represents McCance's first contact with the protagonists of the Scottish Renaissance whose impact on Scottish literature, poetry and music was to become substantial over the 1920s and 1930s. Maurice Lindsay described the friendship between McCance and Scott:

> "The war brought new friendships. At Kennedy Street School, Glasgow, there arrived in 1916 a young student teacher of art, William McCance (1894-1970), later to mature into a distinguished Scottish painter, and the most interesting of the Scottish disciples of Cubism. McCance and Scott formed a friendship that was to last for many years." [2]

McCance then was involved from the earliest point in his career with leading figures of the Scottish Renaissance. (Clearly an individual of strong convictions, he had already expressed himself as a radical activist in the First World War by becoming a conscientious objector, for which he was imprisoned in November, 1917. [3]) It would seem justifiable, therefore, to assume he was an active participant at this early date in discussions with Scott and others regarding Scottish culture and the Renaissance movement.

After marrying fellow student and printmaker Agnes Miller Parker, he moved to London in either 1919 or 1920. [4] He exhibited in the newly formed Glasgow Society of Painters and Sculptors, McLellan Galleries in both 1919 and 1920. When in London, he began a long career not only in printmaking but also in writing. He illustrated for Lloyds Magazine and, later, for MacDiarmid's nationalist The Free Man, as well as contributing to

The Spectator as art critic, 1923-6, and to Art Work, The Modern Scot, The Picture Post, Reynolds News and News Chronicle among others. (His writings are discussed below.)

Having come to London not before 1919, McCance would not have then been aware of J.D. Fergusson's shipyard paintings of Portsmouth exhibited at the Connell Gallery in 1918. However, if they were included as part of the six oils shown at the Twenty-One Gallery in September, 1919, this may have been an opportunity for McCance to see them. The attraction for McCance of Fergusson's work would have been understandable, as being that of a prominent fellow Scot in London experimenting with a geometrical, Cubist style directed towards rendering modern, industrial subject matter. Fergusson remained in London until 1929, whilst McCance left a year later in 1930. It is likely that they would have met many times within the ten years the two were simultaneously in London, especially given the milieu McCance moved in, both as the art critic for The Spectator and through his connection to other Scottish Enlightenment figures.

McCance's work of the first few years in London shows more of a Cubist rather than a specifically Vorticist influence, for example, The Result and Tree Trunk Composition (1921). A more dynamic aesthetic is evident shortly after this date with works such as Conflict (c.1922) **[Fig. 48]**, which may date from 1920 at the earliest [5], McCance followed Conflict with two highly accomplished Vorticist-inspired works, entitled Mediterranean Hill Town (1923) and Heavy Structures (1924). These will not be discussed here as their subjects are not strictly of industry.

Connections between McCance and contemporary Vorticist or Modernist English artists are relevant to the theme discussed here. Although by 1920 the Vorticists had lost much of their pre-War impetus, their aesthetic had not altogether disappeared from the visual arts in London. Whilst McCance would have been intimately aware of avant garde post-War work in Britain through his employment as a critic for The Spectator between 1923 and 1926, personal contact with previous Vorticists was established in 1924, when McCance and Agnes Miller Parker shared a flat with William Roberts (1895-1980).

Most influential on McCance, though, were the paintings and writings of Wyndham Lewis (1882-1957). Lewis was certainly not the revolutionary figure he was before the start of the War, however McCance's awareness of the important aims of Vorticism seem, not to have deterred him on this point and provide the context for McCance's arrival in London after the First World War. McCance's most likely direct contact with Lewis's work may have been in seeing his exhibition at the Leicester Galleries in 1921. Group X, an attempt to reunite some of the leading Vorticist artists, was formed by Lewis and the printmaker Edward McKnight Kauffer in 1919. It included Lewis himself, William Roberts and Edward Wadsworth, among others but exhibited only once, in 1920. This represents another opportunity for McCance to see the work and meet Lewis and his contemporaries.

There exists a useful list drawn up by McCance many years later, sometime after 1966, where he identifies a number of people he had direct connections with. This informal document gives an interesting insight into McCance's own contacts over his career. [6] Previous Group X artists, along

with many other Modernist artists and important writers appear in McCance's list including Roberts, Eric Kennington (a close friend), Edward Wadsworth, Paul Nash, Edwin Muir, Philip Mairet (the author of the 1957 biography of Patrick Geddes), Denis Saurat, The New Age and the politician James Maxton. It is clear that on McCance's arrival in London and throughout the 1920s, he sought out and established contact with some of the most advanced Modernist artists and writers in Britain at the time.

It is proposed now to examine in some detail the intentions of Lewis and Vorticism in general in order to analyse their connection with McCance. It is pertinent to the theme of industry in art that Lewis, late in his life, did make an explicit link between the aims of Vorticism and the more industrialised areas of the north of Britain: "...I considered the world of machinery as real to us, or more so, as the nature's forms, such as trees, leaves, and so forth, and that machine-forms had an equal right to exist in our canvases. I found colleagues who came from the industrial North, like Wadsworth, more ready to accept my views in this respect." [7] It is not impossible that his contact with thinkers such as MacDiarmid may also have suggested that outside London, in Scotland particularly, lay considerably more subject matter for a movement such as Vorticism than in the South. Though Wadsworth was clearly the direct inspiration for the quote above, McCance's contribution may also have been relevant to Lewis's recollections of this time.

Lewis makes it very clear at the beginning of Vorticism that Britain's early experience as an industrial nation has resulted in an

indigenous scepticism not shared by the Futurists. In a perceptive passage, Lewis writes:

> "AUTOMOBILISM (Marinetteism) bores us. We don't want to go about making a hullo-bulloo about motor cars, any more than about knives and forks, elephants or gas-pipes...Wilde gushed twenty years ago about the beauty of machinery. Gissing, in his romantic delight with modern lodging houses, was futurist in this sense. The futurist is a sensational and sentimental mixture of the aesthete of 1890 and the realist of 1870." [8]

The onslaught of Futurism into England, when Marinetti visited in 1910 then exhibited the leading Italian Futurists at the Sackville Gallery in 1912, received discerning attention from Lewis and other artists, particularly C.R.W. Nevinson and Stanley Cursiter. However, the positive assertions made on behalf of mechanisation and the dynamism of new technology by Marinetti cannot truly be said to be supported by Lewis, however sympathetic he was to an aesthetic doctrine which dealt with modern experience. It is possible that Lewis's strain of scepticism and rigour in regard to a machine aesthetic, whilst separating him from the Futurists themselves, made his art and ideas more appealing to his Scottish contemporaries, such as McCance and Fergusson.

Lewis, as a writer, made the precise positioning of his view of machinery and modern life, and their relationship to Vorticism, both at the time, leading up to the First World War and later, quite clear in the following passages:

> ""Vorticism" accepted the machine-world: that is the point to stress. It sought out machine-forms. The pictures of the Vorticists were sort of *machines*...[It] was not an asylum from the brutality of mechanical life. On the contrary it identified itself with that brutality, in a stoical embrace...It did not sentimentalise machines..it took them as a matter of course:

> just as we take hills, rivers, coal deposits...as a matter of course. It was a stoical creed: it was not an *uplift*..." [9]

In a section of the first issue of Blast entitled "The Melodrama of Modernity", he attacked a romantic view of industry, writing:

> "Romance about science is a thing we have all been used to for many years, and we resent it being used as a sauce for a dish claiming to belong strictly to emancipated Futures...I do not hold a brief opposed to Romance, but most of the Futurist work is in essence as sentimental as Boccioni's large earlier picture at the Sackville Gallery Show, called the 'Building of a City'. This was sheer unadulterated Belgium romance: blue clouds of smoke, pouring horses, heroic grimy workers, sententious skyscrapers, factory chimneys, etc." [10]

Given what we know of the unsentimental attitude of Scottish artists under discussion here, it is easy to see why these artists may have responded to the more "stoical" machine aesthetic of Lewis compared to that of the Futurists themselves. In the context of this more philosophical sympathy, it is interesting to note that John Rothenstein, in his essay "Wyndham Lewis and Vorticism" cites Lewis's reference to the Scottish philosopher David Hume, in emphasising Lewis's urge towards reason, classicism and objectivity in relation to the arts and against romanticism and subjectivity. [11] (Such speculative ideas, whilst interesting, lie outside the scope of this thesis.)

McCance's connection with William Roberts and his friendship with Eric Kennington has already been cited. [12] During McCance's stay in London over the 1920s he was geographically always close to other serious artists of Vorticist and other influences based around Hammersmith, such as Roberts, living in Earls Court from 1920 to 1925 and then Chiswick until

1929 before moving from London. McCance was associated with the Grovesnor School of Art, under Claude Flight who continued the Vorticist style into the 1920s and 1930s. For example, McCance's work bears comparison with Flight's Speed (1926), an image based on London trams. Direct connections have been made between the art of McCance and that of the Futurist C.R.W. Nevinson, in comparing McCance's Heavy Structure (Boat Yard) (c.1922) with Nevinson's lithograph Timber Loading at Southampton Docks (1917). [13] In other early works by McCance such as Conflict (c.1922) and Heavy Structures in a Landscape Setting (1922) it is clear that both are mechanical and organic in their forms, relying strongly on a mixture of artificial and natural shapes. The interface between the natural and mechanical was central to Lewis's aesthetic. McCance's style ignores much incidental detail in the human body or in natural forms, schematising them under a rigorous, metallic finish. Whether the subjects are figures or inanimate objects, McCance imposes sleek dynamics on his subjects, never indulging in detailed or florid passages. It is a highly rigorous treatment of the subject. A highly depersonalised portrait by McCance, Portrait of Joseph Brewer (1925), seems to owe most to Wyndham Lewis in its extreme reduction of the figure and his surrounding environment into mechanical surfaces. The quality of Brewer's neck is as artificial as the curve of the pages he is reading.

Given McCance's achievement as a printmaker as well as a painter, it should be noted that it was in the pages of Lewis's Blast that some of the most radical innovations in printing and typographical design were made. McCance in later years was to pursue typography, when in 1944 he was appointed Lecturer in Typography and Book Production at the School of Art

at Reading University. The impact of Blast was very likely responsible for initiating McCance's interest in this field. McCance's earliest experiments in printing used the linocut method, where he could get a clean, machined edge to his Vorticist-based designs, such as Tree Trunk Composition (c.1924).

Whilst McCance would certainly have had ample opportunity to make the Vorticist artists familiar with his work, it remains problematic how influential McCance himself would have been on his associates in London. This may have occured as much through his published writings as through his art. His first public exhibition, at the St. George's Gallery, London in 1928, may well have been the first important opportunity for other artists to see his work, with paintings such as Conflict, although it was at that time around six years old. By this late stage the British contribution to Futurism and the machine aesthetic had certainly decreased substantially in importance and influence.

In later years, McCance's development of a more outspoken aesthetic, related to political and social concerns may also have its roots in the ideas of Lewis. In an undated note by McCance, now in the possession of his widow, he makes explicit reference to his equivocal attitude to the machine: "It is futile to condemn the machine just because we have failed to use it properly. Even some form of standardisation is quite desirable." [14] Like Lewis, he was no Luddite, even if his more mature reflections on the machine acknowledged the serious problems which it brought. This part acceptance of the machine had already been accommodated by the Arts and Crafts Movement later in the previous century (see Part One, Chapter 1).

McCance's need to reassert the above shows the continuance of the issue across this time.

It should be noted that many of the painted subjects by McCance after 1923 become difficult to date accurately, due to conflicting catalogue entries, differing dates on prints and the fact that McCance seems to have editioned and reworked some of his prints over a period of years. Therefore the precise dating of McCance's works must remain to some extent provisional.

Surprisingly, it took McCance almost ten years to get his first substantial exhibition in London, at the St. George's Gallery, February - March, 1928. This fact would indicate that his work up to this point was almost entirely unknown outside his close circle. [15] The St. George's Gallery exhibition was shared with his wife, Agnes Miller Parker, (alongside another husband and wife pair - Blair Hughes-Stanton and Gertrude Hermes.) Gauging by the catalogue entries, McCance seemed to be the only artist of the four engaged in industrial subjects. He showed, among other works, Conflict and an untraced work entered in the catalogue as Mascot "Robot" (a sculpture made in aluminium) indicating his interest in three dimensional work as well as its obvious mechanised subject. This work may be either the work shown in a photograph of around 1925, [16] or, despite the different material referred to, a brass sculpture once illustrated in a sales catalogue. [17] This work is stylistically very close to an existing charcoal drawing, Study for a Colossal Steel Head (1926) **[Fig. 49]** which may well be a preparatory drawing for a three dimensional work. In this image, McCance unites a mechanistic treatment of the human

head which owes its debt to a work of Fernand Léger such as The Mechanic (1920, National Gallery of Canada) as well as a non-Western reference to earlier sculpture, for example, the monolithic heads of Easter Island. Study for a Colossal Steel Head and Mascot "Robot" do show that McCance, along with his Vorticist associates, was trying a number of artistic media, imposing upon those media the aesthetic of Vorticism and the machine.

McCance recalled the Futurists somewhat coolly but not critically in his essay "Idea in Art": "The Futurists attempted to ginger up the actual movement of design and were responsible to a great extent for the interesting experiments that have since been done with abstract movement on the Films." [18] [19] Other references of a later date to Futurism appear in his abstracts and typescripts to his book on art, planned to be called The Hand of Man; a book on art and society. [20] One entry in this typescript reads: "Futurism - The Futurists interpreted rhythm as a sort of mechanised blitzkrieg - Explanation." [21] Another entry is considerably more negative: "They are almost forgotten already. In a few paintings here and there, some of their tricks still appear in a milder form...But enough of Futurism and the Futurist. They seem to have had a crash some time ago. They have been taken to the cemetery of forgotten art in their mechanised hearses,...much good their speed did them." [22] This negativity may in part be explained by McCance's later move, from the 1940s onwards, towards an organic form of Surrealism in both painting and sculpture, inspired by Henry Moore and visits to the prehistoric cave paintings at Lascaux in France, but it is clear that McCance never adopted the stylistic approaches of Futurist art, in its attempt to capture machine or human

movement in art. His aesthetic was generally much more static, with a sculptural solidity replacing Futurism's frenetic dynamic.

One of McCance's most important prints is the linocut Machine Gods (1923) **[Fig. 50]**. This work shows the influence of pre-War Vorticism in its graphic abstraction of an assemblage of industrial motifs, and closely relates to, for example, the industrial prints of Edward Wadsworth such as Newcastle (1913) or Blast Furnaces (1) (Netherton Furnaces) (1919). Machine Gods can only be considered tangentially related to Futurist art. It is a static, sculptural composition which, although having much internal energy, does not push out beyond the boundaries of the image itself. Machine Gods has two African style heads in the top left of the composition. This connection made between technology and non-Western art, paralleled in the handling and highly direct medium, is emphasised by the title which evokes notions of religious worship, machine-age domination and threat. However, it includes references to non-Western masks, a historicising device rejected in Futurist doctrine. McCance returned to Machine Gods a few years later, reworking its colour combinations for Machine Moloch (c.1930). [23] Machine Gods and a related linocut entitled The Engineer, His Wife and Family (1925) **[Fig. 51]** share similar imagery, that of flattened, geometric figures executed in the manner of non-Western art. In The Engineer, His Wife and Family McCance creates an unusual fusion of machine-like design (derived from the the fact that his subject is an engineer) and a basically domestic subject. [24]

We can also locate McCance's use of archaic sources in the work of Jacob Epstein, whose Rock Drill (1913-14), is a direct precedent to

McCance's image in its fusion of machine imagery and primitive art. Similarly, the sculptural treatment of McCance's lino-cut makes the connection to a work such as Rock Drill more plausible. [25] An amalgam of mechanisation and primitivism appears almost contemporaneously in one of McCance's review's for The Spectator entitled "Society of Present-Day Artists (The New Chenel Galleries)" and may clarify his interpretation of Vorticism. He wrote: "We feel that the majority of these young painters are so intent on idolizing the technical gods of the last decade that they are losing contact with the primeval origins of art. Their art is becoming the art of specialists, and as such cannot survive." [26] Interestingly, McCance here levels criticism at an "art of specialists". In much of his writing, he had proposed a more generalist outlook on art, and raised topics of motor car design, pottery, graphics as well as the fine arts. This encyclopaedic attitude would also coincide well with the interests of MacDiarmid and indicate also a shared sympathy with the generalist ideas of Patrick Geddes (see Part One, Chapter 2).

The above passage from 1926 by McCance might allow of a somewhat critical interpretation to be made of Machine Gods, relating less to the undiluted positivism of Futurism and more to, for example, Epstein's sentiments towards his own Rock Drill. Epstein regarded this work as having, "No humanity, only the terrible Frankenstein's monster we have made ourselves into." [27] Here emerges a shift away from the positive view of industry and progress, a re-emergence of the myth of Frankenstein, a return to "primeval origins". [28] A further reference might be found in the fact that the large machine in Fritz Lang's seminal film Metropolis (1926) was called the Machine Moloch, McCance's alternative title for this

work, when he reprinted it in 1930. This title, then, would be consistent with McCance's interest in modern film, cited above, and pays homage to Lang's theme of the inter-relationship between humanity and technology.

In the discussion here, it must be noted that one of the most important artists to treat themes of technology, industry and non-Western art is Eduardo Paolozzi in, for example, works like Tyrannical Tower (1961), Figure I (1984) or his interest in his art's relation to the primitive made explicit in the exhibition and book Lost Magic Kingdoms and Six Paper Moons. [29] Direct influence from McCance to Paolozzi is unlikely, as McCance was and remains, a little-known artist. However, both seem to treat this theme with a similar feeling for solidity and attention to structure. McCance replaces a Futurist dynamic with overall, internally sub-divided compositions which do seem to precede Paolozzi's approach (discussed in Part Two, Chapter 7).

Other technological or industrial subjects include the pencil drawings Mechanistic Figure (c.1928), and Early Telephone (1927) **[Fig. 52]**, an elegant, vortex-like composition showing an artistic interpretation of this modern invention.

McCance also pursued more polemic subjects which relate implicitly to industry and technology: Scots! Unite! **[Fig. 53]**, a political graphic produced for The Free Man publication shows, in a composite image, a manager shackling Scottish industry on a chain. [30] This shows McCance's continued attention to industrial imagery, though now with a more

polemical orientation, reflecting the connection he maintained with MacDiarmid and the Scottish Renaissance movement.

The writings of McCance's, for example those for The Spectator, are significant in that they make clear some of his artistic preferences, which may justifiably be taken as indicating influences on his own art. In this connection, some have already been cited above. In The Spectator review of "The New English Club" [31] McCance noted his admiration for works by William Roberts and Paul Nash. He wrote regarding an exhibition by Maurice Utrillo at the Lefevre Galleries that,

> "...for sheer realism his work has been excelled by no other painter of this epoch. He had a certain direct receptivity of vision, which had some of that same stark realism that is expressed in some of the older Scottish Ballads...At his best M. Utrillo is one of the greatest realists of the age: a great interpreter and recorder of Parisian street scenes." [32]

Here McCance responds with enthusiasm to Utrillo's vividly urban subjects. [33] On "The "Seven and Five" Society, Beaux Art Gallery", however, he is critical of the work of 'post-Vorticist' printmaker Claude Flight, already cited above: "Mr. Claude Flight's very formalised work, although it has the virtue of being definite, would have a more appropriate application to embroidery than it has to painting or sculpture." [34] On a mixed exhibition at the Mayor Gallery he praised a number of advanced European artists, including Metzinger, Ozenfant, Gris, Léger and Severini, describing them as contributing to a "healthy exhibition." [35] These examples do assist in locating some of the current art McCance found stimulating, alongside more standard review work.

In 1930 McCance was the author of an interesting essay entitled "Idea in Art" [36], written in the year of his move from London to Wales. This essay explicitly places him in relation to views held by other figures in the Scottish Renaissance. One passage reads thus:

> "In my opinion Scotland is the great White Hope in the field of European Art...In England, to have an idea beyond the mere technical and manipulatory branch of his art is counted as a disgrace for an artist...When the Scot can purge himself of the illusion that art is reserved for the sentimentalist and realise that he, the Scot, has a natural gift for construction, combined with a racial aptitude for metaphysical thought and a deep emotional nature, then out of this combination can arise an art which will be pregnant with Idea, and have within it the seeds of greatness. Besides the awareness of this potentiality, however, the Scot must break through his narrow provincial barriers and gain a knowledge of what is actually taking place in the world around him..." [37]

In this passage, McCance shows himself scathing of English art and what he perceives as its superficiality, as well as aware of the Scots tradition in engineering and shipbuilding, their "natural gift for construction". His reference to Scots' "aptitude for metaphysical thought" may indicate an awareness of Scottish philosophy through contact with MacDiarmid.

The evidence that can be gleaned from his proposed book on art The Hand of Man: a book on art and society convincingly shows his wide interests and his integrationist philosophy, especially concerning the practices of art and science. The Hand of Man represented many years' work, early sections perhaps dating to the 1920s. Letters, dated 1955, now with the typescripts show that at that time no publisher had been found for it. The notes consist of a variety of clippings and undated pages of

writing, as well as at least one completed typescript. In one synopsis, under Section 4 "Designs in Life" are two relevant headings: "Engineering - economy of force" and "Mathematics - elegant problem" and Section 8 is entitled "Impulse to Art. Same as impulse to mathematics or any other creative work." A different synopsis has, as Section 3, "Assumption to design...relationship to life - games - mathematics - engineering - music..." which echoes in its will to subsume human activities into models and frameworks, the generalist notions of Patrick Geddes. In an undated notepad McCance writes: "It is futile to condemn the machine just because we have failed to use it properly. Even some form of standardisation is quite desirable." [38] In an undated letter he shows his sympathy to integrating human disciplines with craft skills being central to such a synthesis:

> "Heading No2: The Ordinary man - his importance in evolution - retaining the non-specialised mould of the species - danger of mass production converting the ordinary man into a specialist unless he gets leisure to recapture the feel of things through his finger tips...Quotation: Man has given his brain to the machine and he is sacrificing the dexterity of his hands to its service." [39]

This passage, again recalling the spirit of Geddes, seems very close to the issues raised in Thomas Carlyle's "Signs of the Times" (discussed in Part One, Chapter 1). In the final typescript, in the "Art and Industry" section, he was suspicious of the uses to which the artist could be put if involved in industrial design: "He will become an art unit with a fixed and controlled price for his work...Finally he will become tamed, for, having become a specialist, he will not be able to adapt himself to life." [40] His enthusiasm for industrial and technological subjects, especially strong in

the 1920s, may have been an artistic, visual enactment of his broad world view as it came into contact both with the visual impulse represented by Vorticism, Futurism and Léger, and the philosophic impulse represented by MacDiarmid and Patrick Geddes.

Much later in his life, in 1966, an extract from a letter to the Scotsman shows how McCance viewed his own position:

> "Sir, - as I was probably the first Scottish artist to experiment in and practice abstract painting in reaction against academic representationalism in the early 'twenties, when we were more concerned with the problems of design, rather than the "accidental" approach of most of the contemporary exponents of abstract painting[...]" [41]

Clearly, McCance's view of himself remained as that of a radical artist, following European movements in rejection of the indigenous establishment.

McCANCE AND MACDIARMID

McCance maintained a commitment to a Scottish dimension to his art through his contact with members of the Scottish Renaissance, although he did not have a permanent residence again in Scotland until 1963. Ideas he shared with MacDiarmid have already been cited above, however the nature of this connection requires further clarification. By 1925, McCance's sympathy with the cultural ideologies of MacDiarmid was secure, as is established by MacDiarmid's letter to the publishers Blackwood and Sons proposing a book entitled Scots Art. It was to include, as MacDiarmid describes, a chapter on

> "Art and Creative Art-Theory. Professor McCance. Art Critic of The Spectator. Himself an ultra-modern artist of exceptional quality - as is also his wife, whose work along with his is shortly to be on exhibition in London. Both are well known in London and Parisian art and literary circles. Both are Scots and definitely interested in this question of a Scots Renaissance." [42]

The following year MacDiarmid produced an essay, "William and Agnes McCance", where he wrote of McCance and his wife that

> "...they are necessarily approaching these [artistic] problems, and resolving them, as Scots - that is to say that the psychological factor is so directly involved and dominant in work of this kind that the difference between the effects they are securing and the effects their French or German contemporaries are securing gives the precise measure of what is distinctively Scottish in this connection...(although)...the traditions of what is called Scottish Art means nothing to them." [43]

MacDiarmid continues, quoting McCance himself: "The sooner the Scots realise that they have never had a culture the better. We have merely had a good few names..Now that we are about to expand culturally let us examine our attributes. So far there has been too great a cleavage between Engineering and Art." [44] MacDiarmid continues to quote McCance, in a passage he was to re-use in Aesthetics in Scotland:

> "Here then is what we Scots have - a terrific vitality combined with a constructive ability unequaled by any other nation. What more do we need? - merely sufficient analytical power to clear away the maze of sentimentality and accepted "artistic" values which obscure our ideas of Art. Let us no longer alienate our engineers from Art." [45]

The recycling of words credited to McCance shows us MacDiarmid's tendency to cite the ideas of others in the service of his own, but, more

importantly, demonstrates a close intermarriage between the ideas of the Scottish Renaissance and McCance, which seems to have contributed to its expression in the visual arts particularly. It is possible that, as McCance was preparing a book on aesthetics in the mid-1920s, that MacDiarmid is beginning to formulate ideas on art employing the ideas of McCance. When McCance left London for Wales in 1930, direct contact with MacDiarmid and other figures of the Scottish Renaissance became more infrequent, as indicated by MacDiarmid's letters to McCance. [46] In 1939, McCance wrote: "The sooner the younger artists start creating an art which is more vitally related to the Scottish soul and less remote from its people the better," [47] showing him still holding firmly to nationalist tenets, although he had little direct contact with Scotland at this time.

Curiously, MacDiarmid's only reference to McCance in his 1950 Aesthetics in Scotland is as a writer rather than as a painter. He writes that, "...in the continued writings of William Johnstone and William McCance, there are signs of a genuine advance, but these are still very fragmentary and of little effect in offsetting the general Philistinism." [48] MacDiarmid in his writings continued to the end to be aware of McCance, as evidenced in a letter to George Bruce, Features Producer of the B.B.C. in Edinburgh, where he wrote:

> "One of the most interesting Scots I have known (incidentally an old friend of F.G.'s [F.G. Scott] too) is William McCance, to whom I devoted a chapter in my Contemporary Scots [sic] Studies...You know that it has frequently been pointed out that literature and the Arts in Scotland have always been singularly lacking in innovators. Well, McCance is an exception. He has always been away out ahead in all his work. Withal, he is passionately Scottish. I wonder if you could find space in Scottish Life and Letters, or in Arts Review - or as a separate talk - for a feature about this remarkable exhibition [at Reading Art Gallery] of over 40 years work. It ought to be much better

known in Scotland, and claimed for the Scottish Renaissance to which it undoubtedly belongs..." [49]

Another letter to Richard Demarco from MacDiarmid states that "...he is...one of the very few Scottish artists of any conceivable interest to anyone fully abreast of the whole range of modernist developments in the Arts...The traditions of what is called "Scottish Art" mean nothing to him..." [50]

In conclusion, it is clear that McCance very quickly became a central figure in the art community in London after the First World War, developing an art based on the Modernist achievements of Vorticism and Cubism. However, he saw this style and his art in general as integrated into a much wider frame of reference which included an interest in a machine aesthetic and, from this, a deep belief in art's relationship to the constructive invention of engineering. Furthermore, and unusually, he advanced these ideas on the visual arts in relation to the new sense of Scottish self identity promoted by others in the Scottish Renaissance, hence rooting his art and ideas on industry within a specific cultural context.

NOTES

Part Two: Chapter 4. William McCance

1. Claire Harrigan, William McCance: a Vorticist?, unpublished thesis, Glasgow School of Art, 1986, p.2

2. M. Lindsay, Francis George Scott and the Scottish Renaissance, Edinburgh: Paul Harris, 1980, p.29-30

3. P. Elliott, William McCance 1894-1970 (Scottish Masters, No.14), Edinburgh: National Galleries of Scotland, 1990, p.5

4. The precise year is difficult to establish as he was demobilised from the army in 1920 but records in Neo Society catalogue (for a group exhibition at the Godfrey Phillips Gallery, 9 May - 7 June, 1930) as having left Scotland on holiday in 1919.

5. Conflict is dated as such in the 1960 Reading exhibition catalogue and the 1972 Girvan exhibition catalogue, but may be as late as 1922, (as inscribed top right, verso), or even 1924. In William McCance (1894-1970) (Dundee: Dundee City Museums and Art Galleries, 1975) the conigenda notes that "1920" could be read as "1924" which, it suggests as more stylistically consistent.

6. McCance's widow, Dr. Margaret McCance, is in possession of this list, written as a 'reply' to MacDiarmid's The Company I've Kept [London: Hutchinson, 1966], where the poet discussed the numerous significant figures he has met over his life. McCance was aggrieved at not being included, so wrote his alternative.

7. Wyndham Lewis and Vorticism, London: Tate Gallery, 6 July- 19 August, 1956, p.3-4

8. Walter Michael and C.J. Fox, Wyndham Lewis on Art. Collected Writings 1913-1956, London: Thames and Hudson, 1969, p.26

9. Wyndham Lewis the Artist: from 'Blast' to Burlington House, London: Laidlaw and Laidlaw, 1939, p.78

10. Blast 1, (1914), in Wyndham Lewis on Art, op. cit., p.48

11. Wyndham Lewis and Vorticism, op.cit., p.6

12. It is also clear that this friendship continued for many years, as Kennington is a referee for McCance's application to register for the National Register of Industrial Art Designers, around 1942. (Property of Dr. M. McCance.)

13. Cited in P. Elliott William McCance 1894-1970, op. cit., p.7-8

14. Property of Dr. M. McCance.

15. Although the back of the 1972 Girvan catalogue says "Exhibitions of sculpture and of oil paintings and drawings were held at several London galleries and in 1929...in St. Andrew's". For a list of group and one-man exhibitions, see William McCance (1894-1970), (Dundee, op. cit.), p.6

16. P. Elliott, William McCance, op. cit., fig.4

17. Garton, Autumn 1988, which states that the sculpture is now untraced in the United States of America.

18. The Modern Scot, Vol 1, No.2, Summer 1930, p.14

19. Connections with a Modernist film aesthetic can be established through his friendship with avant-garde film maker, Len Lye, of whom he did a portrait drawing in pencil, Len Lye Reading (1927).

20. This unpublished typescript seems to have been begun in the 1940s, as the file is marked as such, but may include passages dating from earlier, as MacDiarmid in a letter to Blackwood of 1925, refers to MacCance offering to contribute a chapter to a book on Scottish art [The Letters of Hugh MacDiarmid, (Alan Bold, ed.), London: Hamish Hamilton, 1984, p.339]. In MacDiarmid's "William and Agnes McCance", he also cites an unpublished book on aesthetics being prepared by McCance in 1925 which probably formed the basis of a prototype for The Hand of Man ["William and Agnes McCance", 20 November, 1925, Contemporary Scottish Studies, reprinted, Edinburgh: The Scottish Educational Journal, 1976, p.59]

21. The Hand of Man, entry No.15, undated paper.

22. Ibid., p.73-4

23. Three versions, Hunterian Art Gallery [GLAHA 22438-40]. Note that the chronology of the printing of Machine Gods is confusing: for example, the Dundee catalogue entry reads - "No40c Moloch of the Machine or Machine Gods 1928: printed 1966. linocut 5¼x6¼", No41a Moloch of the Machine or Machine Gods linocut 7⅛x6⅞" Coll. M.M., b Moloch of the Machine or Machine Gods 1928 4⅞x6¼" Coll. M.M., c Moloch of the Machine or Machine Gods 1930 linocut 11¾x10¼" Coll. M.M." This points clearly to difficulties in identifying the particular state which is being refered to, although it does seem certain that 1923 is the earliest date McCance produced an image of The Machine Gods.

24. Another related work, Study for The Engineer, his Wife and Family (1925) also exists, (property of M. McCance.)

25. McCance's support for Epstein was later expressed explicitly in his article, "Leave Mr. Epstein Alone", News Chronicle, 28 October, 1937.

26. "Society of Present-Day Artists (The New Chenel Galleries)", The Spectator, 27 February, 1926, Vol.136, p.363

27. In Blast (1975), (an A.C.G.B. film, directed by Murray Grigor, written by Richard Cork, 25 mins.). Cited in Harrigan, op. cit., p.12

28. The power of the Frankenstein story as a metaphor for art and industrialisation is discussed with reference to Paolozzi (see Part Two, Chapter 7).

29. Eduardo Paolozzi, Lost Magic Kingdoms and Six Paper Moons, London: Museum of Mankind / The British Museum, 1985

30. The Free Man, 4 February, 1933

31. "The New English Art Club", The Spectator, Vol. 134, 9 May, 1925, p.771-2

32. "M. Utrillo", The Spectator, Vol. 135, 21 November, 1925, p.924

33. The printmaker and painter, Ian Fleming (discussed in Part Two, Chapter 5) also cites Utrillo as an important influence.

34. "The 'Seven and Five' Society", The Spectator, Vol. 136, 23 January, 1926, p.125

35. "The Mayor Gallery", ibid.

36. The Modern Scot, Vol. 1, No.2, Summer 1930

37. Ibid., p.16

38. Correspondence and notes, property of M. McCance

39. Ibid.

40. Ibid.

41. Letter to The Scotsman, 12 February, 1966, p.8

42. Correspondence in The Letters of Hugh MacDiarmid, (Alan Bold, ed.), London: Hamish Hamilton, 1984, p.339

43. "William and Agnes McCance", op. cit., p.58

44. Ibid., p.58

45. This passage is almost identical to MacDiarmid's Aesthetics in Scotland, op. cit., p.87, yet he ascribes this to McCance in a letter to Demarco, 24 November, 1971: ""So far there has been too great a cleavage between Engineering and Art...let us no longer alienate our engineers from Art...now is the time for a real Scottish culture!!"" [Correspondence property of M. McCance.]

46. For example, MacDiarmid - McCance correspondence, 1 September, 1931, The Letters of Hugh MacDiarmid, op cit., p.417 and 4 January, 1934, ibid., p.418

47. "My Scotland, Our Art Tradition", Reynolds News, 15 January, 1939. Cited in Harrigan, op. cit., p.20

48. Aesthetics in Scotland, op. cit., p.95

49. Correspondence of 6 May, 1960, The Letters of Hugh MacDiarmid, op. cit., p.525-6

50. Correspondence of 24 November, 1971 [property of-M. McCance.]

PART TWO: Chapter 5

INDUSTRY AND PRINTMAKING

Research here into industrial subjects in Scottish art indicates in general that painting as such responded only sporadically to the modern environment. In this chapter it is proposed to look in some depth at four printmakers who collectively do provide much more material in terms of industrial and urban subjects. Their work represents an expansion upon the major contribution in this medium being made largely contemporaneously by Muirhead Bone. Indeed Bone's considerable contribution to industrial subjects in printmaking has formed a visual and theoretical foundation for many of the subsequent printmakers in Scotland who continued in this specific tradition, such as William Wilson, E.S. Lumsden and Ian Fleming, discussed below. Due to printmaking's importance to topographical, mass media and popular traditions, a study of artists working in this medium gives a sound indication as to the wider cultural perception of industry and whether it was registered in a positive or negative light.

JAMES McBEY

James McBey, (1883-1959), did approach industrial and urban subjects with some degree of regularity, using etching and drypoint, although as subjects they comprise only a limited part of his oeuvre.

Being entirely untrained in etching and having only homemade facilities in his native Aberdeenshire, he was obliged, in 1902, to construct his own printing press from steel rollers. This was done in a blacksmith's shop and the work which was normally done there was recorded by McBey in his Blacksmith's Shop (1902) **[Fig. 54]**. [1] Being an early work, its technique is basic but it depicts honestly the sensation of interior light and unpleasant working conditions which McBey would have witnessed first-hand. In 1904, McBey shows himself aware of Whistler's Thames Set (discussed in relation to Muirhead Bone, Part Two, Chapter 2), for the etching of Aberdeen harbour, Shipbuilding Yards (1904). A Whistlerian approach continues in Edinburgh subjects of the same year, for example, North Bridge, Edinburgh, which concentrates on Waverley Station's smokey atmosphere and Bakehouse Close (1904-5) which, in the manner of Whistler's London etchings and other nineteenth-century urban subjects, explores the backstreets and alleys of the city. From these early works it is only Blacksmith's Shop which directly tackles the industrial environment without adopting a somewhat picturesque aesthetic derived from the work of Whistler. This inclination of McBey's towards a milder treatment of industrial or man-made nature, compared to Bone's more analytical treatment, continues into later works, for example, Vinaroz, Boat Building, a Spanish subject of 1911 and The Lock at Sandwich (1912).

A two month trip to Holland in July 1910 shows McBey's interest in Dutch etching, especially that of Rembrandt. No industrial subjects were produced, although The Timber Mill (1913) **[Fig. 55]** depicts two men working in the interior of a mill in Overshie. In the depiction of the interior timbers and the light flooding in from behind McBey goes some way to

giving an impression of the atmosphere whilst at the same time hinting at the complexity of the structure. It can be compared to his own Blacksmith's Shop, and to Muirhead Bone's Denny's Old Workshop, Dumbarton (1900) **[Fig. 14]**. An awareness of Bone's art at this time, 1913, is secure in that his reputation as a leading printmaker was by that time well established. A stay in London in 1914 served to renew the interest in Whistler's Thames Set with works such as The Lion Brewery (1914) and Repairing a Barge (1914).

Prior to his commission in 1917 as an Official War Artist in North Africa and Palestine, McBey had been stationed in France, where he produced a series of etchings in the Schneider Munition Works, at Harfleur on the Seine. [2] The most dramatic of these being France at her Furnaces (1917) **[Fig. 56]**, which depicts munition shells being pulled from red hot furnaces. It can be compared to his earlier Blacksmith's Shop, Muirhead Bone's Shipsmith's, Finnieston (1900) **[Fig. 13]**, or, even more closely to James Sharples' painting entitled The Forge of 1849-59, (although there is no evidence to suggest that McBey knew this work). Thus it is established within the tradition of images concerned with the drama of the furnace, the work involved and the striking effect of interior light. After McBey's journeys with the British Army in Palestine from 1917-19 he produced one drypoint, particularly dramatic, of a dawn attack, September 1918 near Jehil: Zero. A Sixty Pounder Opening Fire (1920) **[Fig. 57]** which records the instant at which the large gun is fired. As a recollection of an event in warfare it represents an attempt to capture some of the instantaneous drama of war more usually associated with photography.

Following the First World War, McBey undertook a variety of non-industrial subjects including landscapes and portraits. A contrasting subject, however, is found in his views of New York, specifically the Manhattan skyline, which highlight both the positive and picturesque qualities of urban America. The etching Approaching New York, No.1 (1934) depicts the view of Manhattan skyscrapers over the fore-deck of the passenger ship, 'The Majestic', as does Approaching New York, No.2 (1934). East River, Sunset (1934) **[Fig. 58]** is another powerful panorama of Brooklyn and Manhattan. McBey's affinity with harbours and waterfronts, although partly stemming from Whistler must also be rooted in the coastal village of his birthplace, Newburgh, in Aberdeenshire. This may explain McBey's return to this type of subject after he took up residency in America in 1940 following his rejected offer to become an Official War Artist in the Second World War. Havana Harbour (1941) and New York Harbour (1941) are examples of such depictions of life on the waterfront and the surrounding view of Manhattan's skyscrapers. Whilst McBey's style seems to imply a muted and gentle aesthetic treatment of industrial subjects, tending to compromise the direct interpretation of industry associated with Muirhead Bone, it remains significant that McBey actually executed many images of the modern world and the activity of work within that world.

After the First World War, as has been discussed, the output of Muirhead Bone especially that concerned with industrial subjects dramatically decreased. The only major work is the A Manhattan Excavation (1923-28) **[Fig. 30]**. However, the success of Bone as one of the greatest etchers in

Britain had its influence in Scotland where the 1920s saw the rise of younger etchers and printmakers.

The work analysed here must be seen in the context of The Great Depression of the 1930s which certainly ended the lucrative days of the etching market. The example of James McBey, described in the following passage, illustrates how many artists, including Bone, either abandoned this medium or declined to learn it. As Charles Carter wrote:

> "Alas, the American depression of the early 'thirties, with its repercussions in Europe, meant that the needle of McBey took only a subordinate place in his graphic armoury...The etching boom was over. Etchers could not lightly embark upon the labour involved in the etching and the printing of editions of prints nor publishers take the financial risks." [3]

Artists such as William Wilson, Ian Fleming and E.S. Lumsden worked in the first half of the century and beyond as printmakers and all produced significant industrial subjects.

The Society of Artist-Printmakers

In Glasgow an organisation called the Society of Artist-Printmakers was established in 1921 which became a central contact point for many significant Scottish printmakers, including Wilson who, in the 1930s, was its Honorary Secretary. This organisation was important for establishing and maintaining a sense of direction in etching and printmaking practice in Scotland over the interwar period. Initially, all the members came from the Glasgow School of Art, for example, Ian Fleming, William Armour, Ian Cheyne, Jean Burns and Josephine Haswell Miller. When E.S.Lumsden, the

English etcher and author of the standard work, The Art of Etching, [4] took over the presidency in 1929, the Society moved to Edinburgh in order to pursue the more lucrative market there. A newspaper report of 1935 cited some of the Society's aims which are relevant to the kinds of modern subjects which did appear in their exhibitions. "We stand for what may be termed the Centre of Artistic Politics, being moderns without label - neither ism or ist. We stand for Vitality without Excess, Sanity without Dullness, Modernity without Sensation-mongering." [5] Thus in this passage, whilst hardly establishing themselves as extreme ideologues, the Society members made a strong claim for a reasoned confrontation with modern experience, whatever the subject. An exhibition catalogue of 1937 notes the new impetus the Society had engendered in young Glaswegian printmakers, however the Society also saw the move to Edinburgh as making it more accessible to visiting printmakers from England, such as John Copley and Graham Sutherland. [6] [7] The selective listing of works in that exhibition is evidence that the Society's artists were producing works on the theme of industry. For example, Wilson's The Harrow (c.1937) and The Threshing Machine (1937); Armour's wood engraving Craigangawn Quarry, Stockiemuir (1933) **[Fig. 59]**; J.R. Wallace Orr's Landscape with Mill, Ploughing, Waverley Station, and Guy's Cliff Bridge [8]; Lumsden's Edinburgh Tenements, Canongate Washing and Boston Quay. Other miscellaneous industrial subjects included William E.C. Morgan's The Forge, Achranich, Armyne Ware's The Plough, Alec Buckels' The Flint Mines and J. Elspeth Robertson's The Old Mill. It is clear, therefore, that the entries in this particular exhibition do indicate a fairly widespread representation of industrial subjects.

WILLIAM WILSON

William Wilson (1905-1972), trained at Edinburgh College of Art and although much of his work in etching, engraving and painting deals with non-industrial subjects, he did produce many fine images of relevance to this theme. He is also highly relevant in terms of his close association with Ian Fleming. They were friends from their college days respectively in Edinburgh and Glasgow, until Wilson's death in 1972. [9] Fleming credits Wilson as the most influential artist on his own work (see below).

An undated engraving of around 1933 entitled Colinton Station **[Fig. 60]** depicts the view from the station looking at the rural landscape in the background. The railway line cuts into this landscape, a traditional way within a landscape genre of interpreting industrialisation's intrusion upon the natural world. Two well-known earlier examples of this are Cézanne's The Railway Cutting (1869-71) and Camille Pissarro's Lordship Lane Station, Dulwich (1871), and continued within Scottish painting, for example, William Gillies's The Peebles Train (1950s) and, even closer to Wilson, Ian Fleming's Industrial Landscape, Glasgow (1946). [10] Other engravings and etchings by Wilson, such as Sheds at Colinton (c.1928-29) **[Fig. 61]**, would also appear to be executed at the site of Colinton Station, the latter being more directly topographical. The Bridge at Colinton (1934), (also known as The Oatmill at Colinton) **[Fig. 62]**, shows figures playing football in front of a factory building. A railway shed is also included. The Bridge at Colinton concentrates on the railway within its surrounding context. It represents an approach Wilson also used for a later subject outside Scotland, Welsh Village (1940), which depicts a

mountain village, its church and houses as well as a quarry which lies behind. Tenements (1935) **[Fig. 63]** explores a dark, atmospheric use of etching to emphasise a sense of claustrophobia beneath tall tenement buildings, and, as such, is different from the characteristic clarity which is often achieved in his in etchings. Old Street, Edinburgh (1935) **[Fig. 64]** maintains some of Tenements' atmosphere in its gritty depiction of a now demolished part of Edinburgh. In this etching an element of political activity in the city is hinted at in the foreground where men carry sandwich boards with 'Vote Labour' printed on them. This reference is not incidental, as both Wilson and Fleming were strongly supportive of Left Wing politics.

Wilson also produced two interesting prints depicting industrial machinery in a rural context, though outwith Scotland. These are The Threshing Machine (1937) **[Fig. 65]** and The Harrow (c.1937) **[Fig. 66]** both of which, whilst being of English subjects, illustrate general aspects of Wilson's treatment of industry. The Harrow displays Wilson's ability to understand and clearly interpret his subject, and is a technically highly accomplished etching of a complex object. The harrow lies unused within a beautifully rendered rural landscape. Each component of the harrow as part of a piece of farming machinery is rendered in simple visual terms by Wilson. Both this etching and its partner, The Threshing Machine, although not entirely unpicturesque, seem more a dispassionate analysis of industrial machinery and, by positioning the harrow within a landscape entirely dedicated to farming, Wilson has created two intelligent relatively unromantic images of rural life and the role industrialisation plays within it. The Threshing Machine is composed in such a way that the

figures working around the machine seem almost to function as parts of it. [11] In Wilson's determination to explain detail and preserve clarity he maintains the same kind of vision that Evelyn Carey brought to his photography of the Forth Rail Bridge (see Part Two, Chapter 1). Yet there is also perhaps a political context in which this work can be seen, in that it relates closely in terms of subject and composition to Pissarro's The Threshing Machine (1876). Pissarro has already been posited as a possible source for Wilson's works at Colinton Station, and, as a radical, Left Wing French artist, would certainly have been viewed by Wilson as an appropriate precedent. Therefore, Wilson's The Threshing Machine can be interpreted as being far more sophisticated than merely a well-observed pastoral image. [12]

EARNEST STEPHEN LUMSDEN

An examination of the work of the influential Society of Artist Printmakers' President, E.S. Lumsden (1883-1948), reveals a consistent interest in urban and industrial subjects, in part gained by his living in Scotland, although he himself was English. Like Muirhead Bone, he had no formal training in printmaking, and also like Bone, his first subjects were architectural, for example, Old Gateway, Ludlow No.II (c.1905). [13] In 1907 he produced five works under the title Paris in Construction. The work entitled Paris in Construction, No.2 **[Fig. 67]** is one of the most indebted to Bone, both in terms of style and subject, and clearly Lumsden was the link between Bone and the new generation of printmakers emerging. [14] The connection with Bone also infers one to Charles Meryon, especially considering Lumsden's Parisian subject. Therefore it is not surprising to

find Malcolm Salaman tangentially invoking Baudelaire in his description of the Paris in Construction series: "...his etcher's instinct would elicit from the wonderful intricacies of the scaffoldings, the potent engines of construction, the girders, the lines essential to symmetrical compactness of design which would imperatively call his needle to the copper." [15] In 1909 Lumsden executed his The Scottish Set, a year after he was appointed on the teaching staff at Edinburgh College of Art, where his contact with Scotland began.

It is clear from Menzies & Co. (1909), for example, that Whistler's Thames Set was an important influence. It also displayed Lumsden's advanced technique and fastidious observation in the details of the work. The Steam Crane (1909) is an architectural subject with scaffolding also depicted. [16] Before taking up Presidency of the Society of Artist-Printmakers in the 1929, a fairly large proportion of Lumsden's ouevre can be said to be of an industrial, constructional or urban nature, for example, The Madrid Forge (1905), The Old Workhouse (1905), The Goods Yard Nos. 1 & 2 (1905), The Little Forge (1905), Crane Wharf, Reading (1905), The Kennett with Crane Wharf (1905), The Timber Crane (1905), the series Paris in Construction (1907), and The Scottish Set (1909) (which included The North Bridge, Leith Docks, Menzies & Co., and The Forth Bridge, No.1 & 2), The Steam Crane (1909), and outside Britain, in Victoria, British Columbia, Paint Works, The "Empress", and The Lumber Mill. Lumsden demonstrated his commitment to industrial subjects in reference to the locations for his 1905 subjects of the Crane Wharf in Reading, which he described neatly in a local newspaper of 1908 as "...the only decent place in Reading." [17]

Lumsden is notable here in that he executed a series of etchings of the Forth Rail Bridge, a subject which, since Evelyn Carey's construction photographs, had been all but ignored by artists. The first appear in The Scottish Set in 1909, in which connection the author of an exhibition review in 1910 wrote that, "The series includes a good many plates of Edinburgh, and two of the Forth Bridge proving that Mr. Lumsden is not a slave to the obviously picturesque." [18] Other reviews show an equally positive reaction to this industrial subject by Lumsden, who is praised for sharing qualities than are closely associated with Muirhead Bone: "Mr Lumsden is one of the few who have realised that there is majesty and beauty in that gigantic erection of iron girders, the Forth Bridge," [19] and: ""The Forth Bridge" (No.72) is an example of his direct and lucid handling of significant facts, wherein each line has its own function and meaning." [20] An interesting letter from John Copley, a fellow member of the Society of Artist-Printmakers, to Lumsden exists, from 1924, concerning a painting, rather than a print, of the Forth Bridge. In this, Copley writes: "Your picture of the Forth Bridge looks fine, though I cannot help feeling that as an etching it would look finer..." [21] Lumsden indeed returned to the subject in the Second World War with an impressive etching, The Forth Bridge (1940-46) **[Fig. 68]**, which depicts the huge structure from ground level, looking into the girders. Reference to the War is found in the three barrage balloons positioned above the Bridge.

A further connection exists between Lumsden and a major figure in our discussion here, that is Patrick Geddes. From 1912 to 1919 Lumsden made repeated visits to India. [22] Significantly, contact with Patrick Geddes occurred in this connection, furthered by the fact both had been

resident for much of their professional careers in Edinburgh. The exact point when they met remains unconfirmed, the earliest likely point being sometime between 1908 and 1911 when Lumsden was teaching in Edinburgh. Undated correspondence exists from Geddes to Lumsden indicating that the former commissioned Lumsden to illustrate planned panoramas of cityscapes (which must date from sometime before 1932 when Geddes died.) Excerpts of the letters, written by Geddes from Lucknow, gives an indication of the kind of views Geddes saw Lumsden visualising:

> "...I must now thank you heartily for the excellent panorama, which is exactly what I wanted...For temples and colleges and university, however, the space remaining has been rather small, as you say, and it is a pity I suggested our screen limit...You see with Univ. site thus topographically photographed I shall be able to prepare for a converse panorama, not that of City with Uni. in distance, but of Univ. and Temple with City front in distance...[etc.]" [23]

This collaboration did not leave any extant work that has been traced, however it demonstrates that a form of ideal town planning and urban development was integrated into the visual arts through Geddes' collaboration with Lumsden.

It is possible that Lumsden's significant commitment to urban and industrial subjects may well have influenced or encouraged many artist-printmakers in the Society and even determined what was exhibited under its name. However international-minded and energetic Lumsden as its President was, at a time when printmakers found themselves victims of a badly depressed market, it was finally dissolved in 1948, the year of Lumsden's death.

IAN FLEMING

In the period broadly spanning the printmaking of Muirhead Bone and that of Eduardo Paolozzi, the most significant body of images concerned with the industrial environment in Scotland, are those by Ian Fleming (1906-). Significantly, Fleming also points forward to changing cultural attitudes to industry which reflect post-industrialism as experienced over the second half of the twentieth century.

The Early Years

Being brought up in Glasgow Fleming, like Muirhead Bone, had an early, formative experience of a major industrialised city. Fleming notes an early source of fascination as being the ships models on display seen when as a child he visited Glasgow Museum and Art Gallery. [24] As a student in Glasgow School of Art from 1924 to 1929 Fleming's attitudes towards the city found a highly political expression. Instilled with the traditions of Red Clydeside, he joined the Independent Labour Party, was a member of the Keir Hardie Institute and of the National Party of Scotland (later to become the Scottish National Party). As will be discussed below, Fleming's political commitment is relevant to his depictions of industry.

Fleming started etching under Charles Murray in 1929 in his Post-Diploma year at Glasgow School of Art. This date, marking as it did the year of the Wall Street Crash, also was the point at which the market for etching rapidly declined. [25] The etching revival from 1900 to 1930 was

effectively over by the time Fleming's career had got seriously underway. The healthy context just prior to the start of Fleming's career is described in around 1959 by Sir James Gunn in Christopher Harvie's No Gods and Precious Few Heroes:

> "...painters...benefitted from the desire of the war profiteers to translate their gains, pictures and prints providing a ready means. The one-man show at Cassell's or Davidson's might sell out in a day...There was a boom in etchings: these were easy to store and prints soared to fantastic prices on a seller's market: if I remember aright one of MacBey's [sic] reached the peak at 500 guineas." [26]

It is possible that the restrictive conditions under which the art of etching now suffered may have influenced his choice of subjects, with an emphasis away from uncommercial themes. Fleming has stated, though, that none of his industrial subjects was produced explicitly for market consumption and only his views of Spain and France ever sold. [27]

Three relevant works which Fleming recalled executing in his Post Diploma year, 1929, were Modern Suburbia which depicted Knightswood, in the West End of Glasgow, Glasgow Trades Holiday and Head of a City Youth (a self portrait). [28] Fleming identifies that the encouragement he received from others to try to win a Prix de Rome scholarship inevitably diverted him to more traditional subjects such as Nativity, The Scottish Highland Loch and a major work, the line engraving Gethsemane (1929), although in this latter work he transcribes to a modern context, in the form of the dress and the city in the background, a device recalling Stanley Spencer's relocating biblical events in contemporary dress. [29] Whilst distancing himself from Bone's dominance over British printmaking,

[30] he does acknowledge that, "The influence of a person like Muirhead Bone as far as Glasgow was concerned was very considerable for anyone who was interested in printmaking at that time." [31] He also notes the importance of the Annan's photographic and printmaking studio in Glasgow as a meeting point for printmakers, observing that "...when I started around 1930...I used to go along to Annans. So you had this tradition where Bone, Cameron, McBey and Strang were all being produced by Annans." [32] Clearly there was available to the new generation of printmakers in the 1930s and 1940s a direct link to the leading figures of early twentieth-century printmaking in Britain, the above Scottish artists named by Fleming having all executed works on industrial themes.

After having gained a travelling scholarship from Glasgow School of Art in 1930, he spent a short time at the Royal College of Art, London, after being invited down in connection with his application for the Rome Scholarship. Whilst working in the Royal College print studios for a period of three months, Fleming recalls that the most stimulating connection he made was with the English printmaker, Lesley G. Brammer, who executed a "...marvellous set of etchings of the Potteries...A superb artist I think." [33] Brammer's work certainly seems to be an influence on Fleming in its careful rendering of architectural detail and gentle atmospheric conditions prevailing over industrial subjects. In this sense, Fleming's Slag Heap (1937-8) a direct comparison can be made between Brammer's The Potteries (1930).

Fleming seems often to be uneasy concerning the contemporary prescription of religious subjects in the 1930s above urban subjects, for

example: "...the Castlegate market or something like that." [34] His trip to Paris encouraged study of two engravers important to the development of Fleming: J.E. Laboureur and Charles Meryon, [35] (the latter of whom has been discussed in relation to Muirhead Bone, Part Two, Chapter 2). On his return from Paris, Fleming notes that many of his drawings made abroad were seen soon afterwards to be overly picturesque and topographical. "I couldn't be bothered with it. I felt etching and engraving and painting, for that matter, should say something." [36] Fleming saw his art as properly directed towards significant subjects and capable of carrying important social messages. This Left Wing socialist orientation was shared with artists also in Glasgow around 1940 such as J.D. Fergusson and Josef Herman.

Line engraving as a technique gives a precise linear mark by removing the foundation metal cleanly, without the gouging and softer mark associated with drypoint (the method preferred by Muirhead Bone). Line engraving can be seen as a 'primitive' technique, and as a pre-industrial method of image-making. As a printmaker, line engraving produced for Fleming a parallel effect to what the Early Renaissance artists achieved in paint. This relates to Fleming's belief in revitalising Early Renaissance art, returning to a direct source of religious art. The important feature of line engraving as employed by Fleming is that whilst his technique reverts to a direct means of expression, his subjects do not ignore the industrial reality of the modern environment. This was in contrast to the ruralising intentions of many of his contemporary English printmakers such as Graham Sutherland and John Maxton.

This technique had an implicit political dimension to it, associated with clarity, objectivity and important subject matter in art. In Ian Fleming. Graphic Work Fleming recalls his refusal to undertake a commission proposed by the publishers Bells to do a series of views around Glasgow including the University and other picturesque subjects due to the overtly commercial bias of the job. [37]

Central to Fleming's intentions is the primacy of the world as experienced through the eye: he has described his aesthetic as that of a visual diary, a cataloguing of experience in as direct a way as possible. [38]

From his employment on the staff at the Glasgow School of Art after his Post-Diploma year, many of the subjects were based on sketches done whilst he was abroad and as such are not concerned with Scottish industrial subjects: As the artist recalls: "Most of this was from my French and Spanish trip and that absorbed me right up to the middle of the 'thirties." [39]

Industrial Subjects

In Slag Heap (1937-8) **[Fig. 69]**, Fleming produced one of his most important industrial subjects. It is an atmospheric image of a neglected area of Scottish industrial experience. It recalls closely Muirhead Bone's St. Rollox (1910, published in Glasgow. Fifty Drawings, 1911) **[Fig. 17]**, in its severe sparseness. The location for Slag Heap is recalled by the artist as in the Balornock area of Glasgow, near Springburn, famous for its huge

railway works of the North British Locomotive Company. [40] The frontmost building is a signal box which lies adjacent to an unseen railway line running across the foreground, referring to the nearby Springburn railway works. As in a later work, Industrial Landscape, Glasgow (1946), discussed below, the darkness of the clouds is seen to be due to both the elements, hinted at by the rain falling in the distance, and by the factory chimney next to the slag heap itself. Fleming has chosen to emphasise the grimness of the conditions by depicting the site just after a storm has passed over. There is minimal activity around the site, the only human figures sheltering by the wall of the right hand building, behind the truck. A general sense of decay is indicated by the broken fence which runs along the foreground and the derelict building on the left.

The artist deliberately articulates depth in his work without the use of perspective lines and vanishing points. In Slag Heap he has viewed the composition in terms of a layering of elements: the tower in the far background lying under the slag heap itself, progressing to the foreground via the outbuildings, the brick wall, the signal box and the wooden fence. With the railway line lying in front of the slag heap we also witness an industrial layering which parallels the visual one, with the two different industries adjacent to each other.

In contrast to the shipbuilding and bridgebuilding industries, the type of industries represented by Slag Heap, that is coalmining and railways, tend not to have the obvious visual drama compared to those exploited in the work of Evelyn Carey and Muirhead Bone. Essentially Fleming's Slag Heap is a well-observed, sensitive industrial genre scene,

recording a familiar part of industrial reality in Scotland. It is interesting to note that in this and other artists' works, for example, William Armour's Craigangawn Quarry, Stockiemuir (1933) **[Fig. 59]**, the artist has chosen to depict a less obviously dramatic, more inaccessible area of Scottish industrial experience for subject matter. Fleming recalls that he also executed a painting of this subject (now lost) and other similar industrial themes which were subsequently lost in a fire in his studio at the Glasgow School of Art. [41]

A second important industrial image by Fleming is entitled Industrial Landscape, Glasgow (1946) **[Fig. 70]**, a large etching and drypoint executed largely from memory, which realistically portrays a railway running through tenements, with factory chimneys in the background beneath a darkening sky. It has been identified by the artist as a subject, like Slag Heap, near Springburn. [42] It looks over Springburn Road, which runs over the bridge in the foreground, towards the Pinkston area. (Nearby are the chemical works of Tennents, although not depicted by Fleming.) It is a candid and somewhat pessimistic representation of industry and the city of Glasgow reflecting the harsh conditions which that city experienced in the years immediately following the Second World War. Fleming has stated that his over-riding intention in this work and Slag Heap was to evoke the drabness and cold of Glasgow, the dreary industrial presence having a great impact on him. [43]

The dominant impression given of Glasgow in Industrial Landscape, Glasgow seems to be concerned with the difficulty of life as experienced by those who live there. Two figures in the foreground struggle against

the wind and the rain, their fight with the elements precluding any communication between them regardless of their proximity. There is an ambiguity in the gloom of the sky; the artist hints that it is both the stormclouds and the chimneys which contribute equally to the dark oppressiveness. The overall awkwardness and unease of the scene has been emphasised by compositional devices, chiefly through avoidance of strictly vertical and horizontal lines. The bridge slopes slightly up left to right, the tenements lean back partly to reveal more dramatically the industrial landscape of the background (as well as perhaps even hinting at structural subsidence.) Similarly, the arched bridge over the railway counterbalances the foreground bridge by sloping in the opposite direction. It is a scene whose slight tilting composition gives an indication of the difficulty, dislocation and foreboding of city life where industry resides close at hand. [44] The general proximity of industry to Glasgow and the way it presses itself both demographically and symbolically on the city is strongly reflected in Industrial Landscape, Glasgow. It exemplifies the difficulty of separating 'industrial' subjects too rigidly from 'urban' ones, as the work illustrates how close and inter-related the living areas of the city, represented by the tenements, are to the working areas, represented by the factories behind. Fleming's title is generalised, with the implication that this is in some senses typical of the kind of inter-relatedness between industry and the city that is apparent over the whole of Glasgow. This characteristic of industries lying close to the centre of Glasgow has been noted in Sydney and Olive Checkland's Industry and Ethos. Scotland 1832-1914 where they describe the Saltmarket, Trongate and High Street areas of Glasgow in the 1860s as being home for a diverse range of industries including foundries, slaughter houses, chemical works, docks and

gasworks, all with housing nearby. [45] This aspect certainly continued into the twentieth century and would have had profound psychological effects on the city's populace. (This proximity is much reduced today as environmental stipulations require industries to set up outside areas of housing.)

There may be an important precedent in Scotland for this type of subject, that recorded a more muted, near post-industrial aspect to the declining Scottish economy at that time. In August 1932, The Modern Scot published Stanzas from "An Elegy Written in an Industrial Town" by the poet William Jeffrey. [46] The completed poem was published the following year as Fantasia Written in an Industrial Town. [47] In seven large 'Movements' over 82 pages, it evoked both natural and industrial imagery using a heavily Romantic, quasi-Futurist style. Its ambition and its relation to Fleming's work make it worth quoting at some length:

> For the piston-rod detains us,
> The petrol-pump enchains us,
> The clanking locomotive hath our souls in fee [...]
>
> Honk, honk, honk, honk!
> Traffic quickens,
> Traffic thickens... [48]

These two stanzas clearly owe inspiration to the Modern Movement in poetry, and in particular point to the continued influence of the Futurists in Scotland, evidenced in the way Jeffrey mimics their declamatory style in poetry.

The following passages evoke very much the same scenes as those Fleming depicts in his art, concentrating particularly on the absence of industrial activity:

> *Approaching this Scottish burgh, enskied in startling silhouette*
> *We see the frowning furnaces, tall cliffs of chiselled stone,*
> *And chimneys weathered to the shade of ashen brown and jet*
> *Of fire-worn spars upon a hill where once a wood of pine had grown.* [...]
>
> *Like sentinels they stand, arms grounded fast*
> *And eyelids closing in the knot of sleep,*
> *For that which they would guard has known the last*
> *Wild pulse of life and now lies covered deep*
>
> *In smouldering oxides and smudges of years...* [...]
>
> *No flame is billowed from the furnace tops,*
> *No wing of smoke beats slowly in the sky,*
> *No hammer clatters in th eengine shops,*
> *No whistling locomotive rumbles by;*
>
> *The dynamos are silent in their caves,*
> *The great fly-wheels revolve not in their beds,*
> *The thistle-down above the broom are waves,*
> *And wagons rot within the loading sheds...* [49]

The following passage seems almost to describe the scene in Fleming's Slag Heap:

> *...Past a shine of cars*
> *we press towards the country, through suburban ground*
> *where bungalows conflict with harsh industrial scars-*
> *old quarries where a stone may drop with hollow sound,*
> *deserted gardens, railways, factories where rust*
> *has long since dulled the piston and no workman's found,...* [50]

Jeffrey seems on this evidence to be one of the first to try to capture the change in Scotland's industrial base in creative form. To this end he selects hidden, run-down locations close to Fleming's subjects depicted a few years later. Jeffrey's own preface explains his motives:

"In the industrial portion of Central Scotland, there are several towns that, since the days of the European War of 1914-1918 have been virtually derelict. It is an imagined amalgam of these towns that is the scene of a large part of this Fantasia. In these impoverished places hordes of Unemployed walk the pavements today, and the skyline is pierced by smokeless chimney-stacks. The contrast with conditions known during the War years - when every furnace and chimney belched flame and smoke, and every inhabitant was employed munition-making - is vivid; and it is this that forms the dominant theme..." [51]

Two years later, The Modern Scot anonymously reviewed Jeffrey's completed publication, and, whilst generally finding fault with its archaic style, quoted with approval the above preface. [52]

Fleming's Slag Heap and Industrial Landscape, Glasgow share with Jeffrey a firm orientation towards a less heroic industrial presence then emerging in Scotland.

The Second World War

In 1940 Fleming left his job at the Glasgow School of Art for War Service [53] and from 1942 onwards Fleming served in the Police War Reserve in Glasgow from where he witnessed some of the devastation experienced by the city during the Maryhill Blitz. He also showed himself aware of the political context for the war: "I was angry at war, but equally angry at Fascism. I was in a reserved occupation during the War but wanted to make my protest about war, so I went into the Police Force [sic] Reserve." [54] His etchings based on his wartime experiences mark a different stage in Fleming's development, where he achieves more confidence and consistency

in his work. His method included doing sepia wash drawings invariably based on memory, the only exception being Bomb Crater, Knightswood (1942) **[Fig. 71]**, which was visible from his window, [55] then worked up into etchings. The mortuary and Fleming's direct contact with it must be seen as a contributing factor to the darkness and symbolism evident in Fleming's work around this period. This found expression in a powerful series of etchings based on the theme of the Blitz and continues the tradition of artists' work which attempts to show the nature of the destruction which modern warfare inflicts on the city. For example, Bomb Crater, Knightswood, Air Raid Warning (1942) **[Fig. 72]**, and Shell Burst (1942) **[Fig. 73]**, all of which are worked up from quick sketches and are part record, part imaginative reconstructions of Fleming's direct experiences. Unlike Bone's work of the First World War Fleming is more disposed to draw on recollection: Shell Burst depicts a split second and is therefore an image only recalled later by the artist. Bone commented on his complete reluctance to work in this way: "I do not like to imagine war scenes and so only drew what I saw, and this was only when I had a chance to digest it." [56] Shell Burst shares an immediacy with the medium of photography. Unlike in the First World War, the demarcation between the roles of photography and the other visual arts had become established, thus the tension between photography and printmaking for Bone is not evident in Fleming's images over twenty years later. In Shell Burst the silhouette of the soldiers are exposed for a split second by the glare of the explosion, yet caught by the artist in one vivid image. Its strong design, emphasised at the expense of detail, indicate Fleming looking at the dynamic composition associated with Vorticism around the First World War. The central soldier's arm on the left continues a line drawn to

indicate the outward explosion thus forcing the composition into a rigorous structure. Verticals and horizontals are avoided in order to negate any feeling of stasis. In his reliance on an imaginative reconstruction Fleming seems closer to English artists such as Nevinson, Nash and Wadsworth working in the First World War, who were similarly more polemical in their horror of war than Bone. Air Raid Warning again explores a Vorticist-like composition in order to emphasise a dramatic event, in this case the spotting of an enemy aeroplane above Glasgow. Diagonals of the buildings and walls counterbalance and echo the strong diagonals set up by the searchlights cutting across the night sky. This deliberate tilting of the composition also produces an effect of unease and possible panic.

Regarding Bone's influence Fleming says that he was not aware of Bone's work of the First World War at that time: "I knew of his early Glasgow stuff and I knew of his Manhattan Excavation, but I didn't know of Bone's work as far as the War was concerned." [57] However, the compositional effects of the searchlights in Air Raid Warning remain very close to those explored by Bone in his Piccadilly at Night - 1915 (1915). Equally, Nevinson and Nash had given talks at the Glasgow School of Art, and Fleming has said of them, "I very much liked Nevinson's work...and therefore possibly subconsciously influenced...I was most impressed with Nash's war stuff." [58] Although Fleming's work based on the Maryhill Blitz is not directly of industrial subjects, it does show the impact on an urban community of modern, impersonal warfare, symbolised in the bombing of civilian areas within a city.

The etching Bomb Crater, Knightswood is very much a reworking of Bone's demolition scenes, for example the pencil drawing Demolition of the Old Sugar Exchange (1910) **[Fig. 18]**. The hole lies immediately in the foreground, as it does in Bomb Crater, Knightwood, with standing buildings behind and workmen placed randomly to show the work being done and to indicate scale. The important difference between the two lying in the fact that Bone is showing a scene of organised demolition whilst Fleming, perhaps even ironically recalling Bone, naturally wishes to show the randomness of warfare's assault on the city. (Also executed by Fleming was a painting of the same title, donated to the People's Palace, Glasgow.)

Fleming was not the only one to find a contemporary creative form to the attacks on Glasgow. J.F. Hendry's poem Air War (1944) reads:

> *Burning and blasting the house of tenderness*
> *Stoked with love the guns blare hate like whores.*
> *What hope has man or beast or maid*
> *When moated kingdoms tumble down*
> *Extinguishing lights in a bomb-racked town?*
> *Yet in her kiss the cities raise their heads,*
> *Towers throw dunces' caps into the air.*
> *The dazed streets wind a catalogue of lovingness.* [59]

Hendry shares with Fleming the same stark vision, mixed with anger at the destruction which the bombing of Glasgow brought.

Symbolism reached its peak in Hellish Symphony (1942) **[Fig. 74]**. The former showing a skeleton, a representation of Death, conducting over Glasgow. An important precedent for Fleming's treatment of this subject can be found in the work of Otto Dix, for example, Storm Troops Advancing Under Gas (1924) in its use of symbolism for didactic purposes within the

medium of etching. Both Dix and George Grosz have been identified by the artist as influences on his work, which can be understood not only in stylistic terms, but also on a political level, as Fleming similarly saw a Left Wing message within his art. [60] [61]

From a political perspective Fleming's etchings on urban, industrial themes were direct responses to the visual stimulus represented by Glasgow and its surroundings, and do not make Fleming's adherence to Socialism explicit. However, it is notable that Fleming's images of Glasgow and general industrial subjects are closely related to the images of artists who worked around the Clyde Group (discussed in Part Two, Chapter 6) such as Bet Low and Tom MacDonald, who more directly united their ideology and their art. Port Dundas, for example, was a popular locale for both these artists and Fleming, who executed a work, Port Dundas (c.1946) **[Fig. 75]** which depicts an industrial area within Glasgow, although generally more circumspect and topographical in its execution than Slag Heap or Industrial Landscape, Glasgow. Fleming argued, distinguishing his approach from that of the Clyde Group, that,

> "..my echings are not overtly political but they represent me growing aware of my environment. I think that is very essential...I don't think that Charlie Murray or myself were consciously trying to make a social comment, for want of a better word, in any industrial thing that we did. We simply reacted to our individual environment." [62]

Fleming, though, was not only looking at fellow Scottish artists in order to find precedents for strongly contemporary subjects. He recalls that during a trip to the United States, he became aware of the work of Ben Shahn which he very much admired for its synthesis of image and word

in order to embody a polemical idea. Fleming states:

> "I had a great admiration for Ben Shahn. One of the problems with Ben Shahn in that he is constantly being accused of being simply an illustrator...His subjects, as well as his use of lettering, was an appeal because I always felt that art and etching should try to say something which is relevant to the human condition." [63]

A typical example of Shahn's work in this context is For Full Employment After the War. Welders (1944). [64]

The issue of style is important in Fleming's work in that, consistent with a tradition in Scottish etching, clarity and precision of line is emphasised in preference to Romanticising effects in etching which distinguishes the stylistic tradition of Whistler, for example. Equally the Expressionist manner and temperament, is rejected by Fleming, who says, "The fury, the anger of the artist at work is absolutely alien to me, the other pole." [65] Precision and clarity, qualities particularly evident in the medium of etching, can be used to intimate a desire to understand the functioning and visual appearance of the subject, which can also be associated with clarity of purpose. In this context it can be seen that the analytical mood evident in Fleming's work shares profound intentions with the documentation photograph of Evelyn Carey (see Part Two, Chapter 1) and the detailed and visually coherent aesthetic of Muirhead Bone (see Part Two, Chapter 2).

CONCLUSION

The above analysis of industrial subjects in etching and printmaking around the First World War to the 1940s illustrates continuity with an earlier printmaking tradition, as well as gradual changes in industry's depiction. This period saw the rise of a transition in art reflecting a changed cultural perception of industry itself. It became increasingly difficult for succeeding generations of artists to depict convincingly an era of heroic industrialisation when the consequences of economic decline were becoming apparent. Muirhead Bone represents the last expression of industrial heroism in Scottish printmaking, although even his experiences during the First World War radically curtailed his positivistic approach to modern subjects.

It is significant that one of the rare images by Bone of the inter-war period on an industrial theme was an American subject: A Manhattan Excavation (1923-28). Like James McBey, Bone sensed that it was only in the United States, untouched by the devastation of the First World War, could a heroic attitude towards the industrialised world be maintained. It is no coincidence that the artist who most enthusiastically supported the world of industry was himself an American, the printmaker Joseph Pennell. The scale of economic wealth in the United States in the twentieth century was distinct from and much larger than that of Victorian Britain, yet engendered a similarly dominant cultural self-image. As Perry Anderson observed, "There, heavy industry - railroads, steel, later petroleum, auto - generated fortunes incomparably larger than any agrarian wealth and overtopping those of the richest financiers as well...It was the absence of

figures like these which distinguished the Victorian economy." [66] The disillusionment which was felt strongly in Britain after the First World War, confronted as it was with a large amount of written, verbal and visual documentation showing the destruction of Northern Europe, merely confirmed that the spirit of the Victorian era and its empire were ended. A tangible contraction of the industrial base in Britain naturally affected broader cultural perspectives, including those of the artists who chose to treat the modern, industrialised world. For example it is difficult to imagine an artist in the early 1930s or late 1940s, when the Scottish shipbuilding industry was collapsing, [67] being able to capture the collective enthusiasm of shipbuilding in the way that Bone's Shipbuilding, Whiteinch (1899) **[Fig. 11]** does. Only the active rearmament and munitions programmes prior to and during the Second World War produced shipbuilding activity on such a scale as to allow artists to promote positivism in the face of long-term industrial decline. This is the context for Stanley Spencer's ambitious shipbuilding paintings of the Lithgow yards in Port Glasgow, 1941-46, which were official commissions from the Government.

Some of the industrial subjects by William Wilson and William Armour represent a ruralising approach to the theme, for example, The Harrow by Wilson and The Plank Bridge by Armour. These type of genre works must be seen in the context of the post-First World War period, where rural industry, such as agriculture, could still be convincingly portrayed as an industry relatively unspoiled by modernisation and the War. At its least adventurous this became a specialised form of industrial nostalgia. If a more positive approach to industrial subject matter could not be sustained inevitably art dealing with industrialisation had to reflect the

ambivalence or hostility associated with this type of subject. In Ian Fleming's work, for example Slag Heap or the post-Second World War Industrial Landscape, Glasgow, the sense of unease and oppressiveness was made explicit. The avoidance of positive representations of industry mark Fleming's generation of printmakers from that of Bone's. When the more grim aspect of industrialised life was the subject of one of Bone's works, for example Shipsmiths, Finnieston (1900) **[Fig. 13]**, they have a glowing drama and presence predicated on the Romantic tradition, which Fleming and his contemporaries seem consciously to avoid. Lack of conviction in this area of artistic subject, or at least the feeling that one could not tackle an industrial subject in 1946 with the same spirit of an artist working forty years earlier, may also explain Fleming's reluctance to identify an industrial genre as separate from any other subject in his oeuvre. Certainly there is much in his body of work which has no connection with industrial or urban subjects, such as Avignon from Villeneuve, the Palace of the Popes (1931-33), for example.

Printmaking ater the First World War and following the Second World War in Scotland, when interpreted in this way, may be seen to reflect the broad cultural perception of industry, as associated with the Depression and general decline, and with poverty and unemployment. The art of this period layed the cultural groundwork for the critical and, in some cases cynical, attitude towards the modern industrialised Western World which dominated from the 1950s to the present. Over this later period has been created an environment in which we can understand the emergence of artists with a post-industrial perspective such as Eduardo Paolozzi (see Part Two, Chapter 7).

NOTES
Part Two: Chapter 5. Industry and Printmaking

1. Ref. Martin Hardie, Etchings and Dry Points from 1902 to 1924 by James McBey, London: P&D Colnaghi & Co., 1925, p.iii

2. Harries, op.cit., p.24

3. C. Carter, Etchings and Dry Points by James McBey, Aberdeen: Aberdeen Art Gallery, 1962, p.xiii

4. E.S. Lumsden, The Art of Etching, London: Seeley Service, 1925

5. Daily Record and Mail, 8 November, 1935

6. Preface, Society of Artist-Printmakers, 16th annual exhibition catalogue, Manchester: City Art Gallery, 1937, n.p.

7. Graham Sutherland wrote to Lumsden illustrating his own enthusiasm for the Society in the following terms: "...I hope I am not too late to submit work as I should certainly like to do so...I am most anxious to become a member of your society. Mr. Macnab tells me that it is really emanicipated." Sutherland - Lumsden correspondence, 15 February, 1933, (Department of Prints and Drawings, Scottish National Gallery of Modern Art, Edinburgh.)

8. Wallace Orr also depicted scenes of dereliction after the London Blitz, stylistically close to Ian Fleming, though in their subjects also owing a debt to Bone, for example, London in 1940 and Marylebone Goods Yard in 1941.

9. For example, correspondence from Ian Fleming to E.S. Lumsden, dated 7 November, 1933, reads: "I met Wilson on Saturday in Glasgow...-and definitely assisted my desire to join the Society [of Artist-Printmakers]. He gave me the works." Fleming - Lumsden correspondence, (Department of Prints and Drawings, Scottish National Gallery of Modern Art, Edinburgh.)

10. For an interesting discussion of this industrial sub-genre in North American art, ref. Leo Marx, "The Railroad-in-the-Landscape: An Iconological Reading of a Theme in American Art", The Railroad in American Art. Representations of Technological Change, (Susan Danly and Leo Marx, eds.), Cambridge: The M.I.T. Press, 1988, pp.183-208.

11. These two works were cited in a contemporary exhibition review which noted that, "Another Edinburgh artist, Mr. William Wilson, strikes an appealing note with farmyard studies ("The Harrow" and "The Threshing Machine"), in which motion and the sights and sounds of rural life are strongly conveyed." [Edinburgh Evening News, 10 February, 1938.]

12. Around 1933, William Armour (1903-1979), also executed a number of industrial subjects which relate to other young printmakers of the time such as Wilson. These subjects are Craigangawn Quarry, Stockiemuir (1933),

The Plank Bridge, (undated), and The Broomshed (1933) and are all wood engravings, his preferred medium.

13. ref. Malcolm C. Salaman, "The Etchings of E.S. Lumsden, R.E.", The Print Collector's Quarterly, Vol.8, 1921, p.91. The connection between Bone and Lumsden is direct, illustrated by the fact that Lumsden lent his important print by Bone of The Demolition of St. James's Hall, Interior to the Royal Scottish Academy Exhibition of 1926, so knew intimately of Bone's industrial subjects. [ref. The Royal Scottish Academy Exhibitors, 1826-1990, Vol.1, (Charles Baile de Laperriere, ed.), Calne: Hilmarton Manor Press, 1991, p.151.]

14. The former of which was cited by Salaman in an article of 1914: "...his impressive Paris in Construction set in 1907, etchings which, with fine precision of draughtsmanship and etching quality, while not eluding a suggestion of Meryon's inevitable influence, especially in The Horses - a remarkable print - show a freshness of eye in the conception and treatment of French scaffolding and building which makes for originality." "The Etchings of E.S. Lumsden, ARE", Studio, 15 August, 1914, p.185-6

15. "The Etchings of E.S. Lumsden, R.E.", op. cit., p.94

16. It should however be noted that Lumsden's Scottish Set did not only include industrial and architectural subjects but also the more typical landscapes, for example, Loch Shieldaig.

17. "A Reading Etcher", Berkshire Chronicle, 8 February, 1908

18. Evening Standard and St. James Gazette, 12 January, 1910

19. Martin Hardie, Queen, 22 January, 1910

20. J.B. Manson, The Outlook, 17 August, 1912

21. Copley - Lumsden correspondence, 6 September, 1924, (The Department of Prints and Drawings, Scottish National Gallery of Modern Art, Edinburgh.)

22. E.S. Lumsden, 1883-1948, Edinburgh: Printmakers Workshop, 1983, n.p.

23. Geddes - Lumsden correspondence, 5 March, n.d., (The Department of Prints and Drawings, Scottish National Gallery of Modern Art, Edinburgh.)

24. Interview with Anne Whyte in Ian Fleming. Graphic Work, Aberdeen: Peacock Printmakers, 1983, p.3

25. Ref. Godfrey, Printmaking in Britain, op. cit., p.115

26. Christopher Harvie, No Gods and Precious Few Heroes, London: Edward Arnold, 1981, p.23

27. A. Patrizio, interview with the artist, 18 March, 1989. Interviews were conducted with Ian Fleming, with regard to this thesis, on 9 March, 1988, 18 March, 1989 and 27 September, 1989. Citations below give the date relevant to the quote used.

28. Ian Fleming. Graphic Work, op. cit., p.7

29. One work contemporary with Gethsemane, The Resurrection, has an inscription "with apologies to Stanley Spencer," and clearly refers to the latter use of contemporary costume for biblical events.

30. Fleming has described one of Bone's lectures at the Glasgow School of Art in the following terms: "He was a very reticent, rather dull speaker...I wasn't very impressed." A. Patrizio, interview with the artist, 9 March, 1988

31. Ibid.

32. Ibid.

33. Ian Fleming interviewed by Anne Whyte, Aberdeen Art Gallery, January 1983. Relevant excerpts from the above taped interview were made by A. Patrizio for citation in this thesis.

34. Ian Fleming. Graphic Work, op. cit., p.7

35. Ibid., p.9

36. Ian Fleming interviewed by Anne Whyte, Aberdeen Art Gallery, op. cit.

37. Ian Fleming. Graphic Work, op. cit., p.13

38. A. Patrizio, interview with the artist, 18 March, 1989

39. A. Patrizio, interview with the artist, 9 March, 1988

40. A. Patrizio, interview with the artist, 18 March, 1989

41. Ian Fleming interviewed by Anne Whyte, Aberdeen Art Gallery, op. cit.

42. A. Patrizio, interview with the artist, 18 March, 1989

43. Ibid.

44. An interesting parallel appears in the poet William Jeffrey's Fantasia Written in an Industrial Town, discussed in this chapter, where the lines "Clatter, batter, rattle, spatter:/See the dull perspective shatter!" evoke the same loss of perspectival unity, [op. cit., p.23].

45. S. and O. Checkland, Industry and Ethos. Scotland (1832-1914), Edinburgh: Edward Arnold, 1984, p.109

46. The Modern Scot, Vol.III, No.2, Dundee: James H. Whyte

47. W. Jeffrey, Fantasia Written in an Industrial Town, London: Cranley & Day, 1933

48. Ibid., p.12 and p.31

49. Ibid., p.32-36

50. Ibid., p.92

51. Ibid., n.p.

52. The Modern Scot, Vol.IV, No.4, January, 1934, op. cit., p.337-8

53. Ian Fleming. Graphic Work, op. cit., p.15

54. A. Patrizio, interview with the artist, 9 March, 1988

55. Ian Fleming interviewed by Anne Whyte, Aberdeen Art Gallery, op. cit.

56. Bone - ffoulkes correspondence, 31 March 1929, Artists at the Front. Muirhead Bone, 1916-17/1918, G4010/27, Imperial War Museum.

57. A. Patrizio, interview with the artist, 9 March, 1988

58. Ibid.

59. Scottish Art and Letters, Vol.I, No.1, 1944, Glasgow: MacLellan, p.4.

60. A. Patrizio, interview with the artist, 18 March, 1989

61. Another artist to draw recently on the Glasgow Blitz of the Second World War, (in Clydebank rather than Maryhill) is Tom McKendrick, whose abstracted images evoking the sensations of the Blitz, although highly successful, differ again from Fleming's in intention in that they were not experienced first hand. Ref. Blitz, Glasgow: Lillie Art Gallery, 1986

62. A. Patrizio, interview with the artist, 9 March, 1988

63. A. Patrizio, interview with the artist, 27 September, 1989

64. Evidence of Fleming's continued commitment to industrial subjects in Glasgow is found in Glasgow Triptych, a large etching dating from around 1977, which depicts the River Clyde, the M8 Motorway and Old Glasgow. The left panel is of children playing football, thus in the tradition of Joan Eardley, with the right panel showing a large, reworked version of Industrial Landscape, Glasgow.

65. A. Patrizio, interview with the artist, 9 March, 1988

66. Perry Anderson, "The Figures of Descent", New Left Review, No.161, 1987, p.35

67. Michael Moss and John Hume, Workshop of the British Empire. Engineering and Shipbuilding in the West of Scotland, London: Heinemann, 1977, p.107

PART TWO: Chapter 6

POLITICS AND PAINTING IN GLASGOW AFTER 1940

This chapter analyses the work of important Glasgow painters working from the Second World War onwards, all of whom have concentrated on industrial and urban subject matter. Over the middle decades of this century, those interested in the cultural, political and economic health of Scotland already perceived that its industrial base was in permanent decline. Previously, the relationship between art and industry in Scotland had been seen in the context of a powerful industrial presence. With the approach of post-industrial changes, signalled by the closure of shipyards, munitions works and railyards, for example, [1] the relationship between art and industry inevitably changed to reflect this decline.

The Glasgow art scene at the start of the Second World War saw a dramatic increase in energy compared to previous decades. In 1939 J.D. Fergusson returned to Scotland, taking up residence in Glasgow. The following two years respectively, saw Josef Herman and Jankel Adler come to Glasgow as exiles from the War in Europe. Stanley Spencer, in the years 1940-6 was engaged in his war commission to paint the activity of shipbuilding, based on his experiences at Lithgow's, Port Glasgow, and it is likely that contemporary Glasgow painters were influenced by his presence, perhaps best illustrated by Joan Eardley's The Mixer Men of 1944. Muirhead Bone, too, revisited the Glasgow shipyards to undertake drawings and prints for the Admiralty. [2] In terms of newly established

organisations to facilitate the changes apparent at the time, the New Art Club was founded in 1940 at Glasgow School of Art, followed two years later by the New Scottish Group. An exhibition by the New Scottish Group was reviewed by Robert Melville in the first issue of Scottish Art and Letters in 1944, [3] which had as its art editor, J.D. Fergusson.

The burgeoning artistic scene in Glasgow was accompanied by a greater political awareness within a cultural context, evidenced by John Singer's Million: New Left Writing magazine, first published in 1943, and the Clyde Unity Theatre, described by Cordelia Oliver as "...a political entity, democratically run by a diversity of members held together by a common anti-Fascist aim." [4]

Those artists involved in the New Scottish Group included J.D. Fergusson, George Hannah, Jankel Adler and Donald Bain, whose ink drawing Machine Man (1943) **[Fig. 76]** typifies the bold, Expressionist treatment of an ostensibly industrial subject, clearly different from the topographically-based style which became established in Scotland from the example of Muirhead Bone. Josef Herman's style is clearly the inspiration behind Machine Man. A contemporary publication, from 1950, was dedicated to Bain's work and shows his interest in industrial subject-matter, which although not representing a large part of his output, had a consistent presence. In its introduction, the author, William Montgomerie, generalised on a broad range of themes, including industrialisation, which he believed gave the appropriate context for Bain's work. He noted that Bain's art should be set against "...an industrial background of docks, pits and city life," as well as a stylistic indebtedness to J.D. Fergusson. [5] Montgomerie

then expanded on the effect of industrialisation on Scottish art, seeing it as, alongside Calvinism, a negative influence:

> "...The heart of England is a machine. In Scotland too, it is even truer that the heart of our society is a machine, if in this term we subsume the human element without which our stone cities would be as dead as the machines in our factories. It is in the human beings, hived about the machines in the factories as bees about the comb, that this pagan element, suppressed by Capitalism and Calvinism, is undeveloped. The pagan element of art and beauty become romantic since the beginning of the Industrial Revolution, has failed to digest that Revolution and its products, its factories, tenements, shipbuilding yards, and cities...Donald Bain knows intimately both the country and the city; and his experience of both has not made him a romantic." [6]

Significantly, Montgomerie here repeats Muirhead Bone's 1937 complaint that Scottish art and culture had yet to accommodate the industrial presence in a creative form. The author continued: "The boredom of modern cities is an international phenomenon, but takes an extreme form in Scotland...Our Scottish tenement cities, cultured wastes,...give a false glamour to mediaeval Scotland and to the Gaelic Highlands." [7] Citing three industrial subjects by Bain, Shipping, Dredgers and Beyond the Housing Scheme, Montgomerie seeks to explain Bain's art by identifying ancient Scottish concerns with industry: "A recent painting, Cranes, returns to an urban industrial theme. It is symptomatic of Donald Bain's effort to find a channel for that pagan principle of art and beauty,...and through the Industrial Revolution that followed, deep into the industrial Scotland of to-day." [8] It must be said, however, that the two industrial paintings illustrated, Quarry near Dundee (1945) and Industry (1945) are derived strongly from landscapes by Fergusson and subsume the industrial subject into a generalised Expressionist style. From these works it is difficult to identify Bain's response to industry with any degree of certainty.

Painters such as Tom Macdonald, Bet Low and William Senior, who were all members of the Clyde Group of Writers and Artists, produced a Broadsheet One issued in December, 1946, although the Group was founded some time before this date. [9] Macdonald had expressed his political convictions explicitly in the 1930s by participating in the Spanish Civil War as a marine engineer for the Republicans. However, whilst there was an involvement by visual artists in the Clyde Group, it seems that most of the membership were writers rather than artists. [10] In terms of the visual arts, though, they rejected any elitist notion of fine art practice, directing their art to the general public and cultivating a crude informality in terms of technique.

Dennis Farr's exhibition catalogue, New Painting in Glasgow 1940-46 [11] cites the kind of new commitment to recording and interpreting the urban and industrial environment of Glasgow by the members of this community, taking their lead, undoubtedly, from the major and influential precedent laid down by Muirhead Bone at the start of the century. In fact, it is hard to avoid the conclusion that Macdonald's Garscube Road (1946) **[Fig. 77]**, in its high vantange point over the city and raking perspective owes much to recently executed drawings by Muirhead Bone such as St. Bride's and the City after the Fire, 29th December, 1940 (1941) **[Fig. 29]**. Macdonald's direct experience of industry had been strong from the outset of his working life, training as a marine engineer at the large Barclay, Curle & Co. yard in Scotstoun for five years, then, at the outbreak of war working for two years as a tool maker. Macdonald, like Low and Bain, did represent the city's industrial presence in a significant proportion of his work, although by no means all. Interesting works by

Macdonald include the brush and ink drawing Coal!, from the 1940s (no precise date exists for this work), with its complete focus on the face of a man - no coal as such appears. The linocut Rushhour Clydeside, (1940s) [Fig. 78], shows the conjestion of workers and vehicles in Glasgow from a high perspective.

Relevant works shown by Farr in his exhibition demonstrating the preference for industrial or urban subjects at this time, include Tom Macdonald's In the Street (1944-5), Transport Depot (1944-5), George Hannah's Street Scene (c.1943), Backyard (no date) and Backyard with Figure (no date), and John Morrison's The Polishing Shop (1943). With artists such as Herman, Adler, Joan Eardley, Macdonald and Low also working strongly in the figurative and realist traditions, and all closely connected to each other on a personal basis, this new commitment to the urban and industrial reality represented by Glasgow was being shown at a high level in Scottish art, though Bet Low recently recalled how little interest there was at the time in artists who recorded such subjects. She writes that, "In those days, nobody wanted to look at our drawings of slums and down and outs, etc." [12]

This sustained interest in industry over this period does have strong parallels with contemporary fiction, some of which viewed the Clyde and Glasgow in grand, elegiac terms but firmly contextualised in the wider political arena. In his book The Dear Green Place? The Novel in the West of Scotland, [13] Douglas Gifford cites many novels of the time which sought to give creative form to Scotland's industrial experience. Edwin Muir's Poor Tom (1932), James Barke's The Land of the Leal (1939), McArthur and

Long's No Mean City (1935), E. Gaitens' The Dance of the Apprentices (1948) and, most prominently, the novels of George Blake such as The Shipbuilders (1935), The Constant Star (1945) and The Westering Sun (1946) all represent a popular and immediate group of works over this period, analogous to the kind of images the Clyde Group artists were creating, though varying in their allegiance to specific political ideals. [14]

In assessing the status of this type of art, caution is required in identifying intentions, as not all these artists were necessarily sharing the same aims. Joan Eardley's depictions of the children and women who lived in the shadows of the shipyards, from the Second World War to the 1950s, such as Shipyard with Cranes, Port Glasgow (c.1951) **[Fig. 79]**, Shipbuilders' Street (c.1952) **[Fig. 80]** and Children and Chalked Wall (1961-3). Her oeuvre is entirely devoid of explicit political content, founded on personal empathy rather than ideology. Whatever their different purpose, Eardley's urban paintings, like those of contemporary artists of the Clyde Group, remain important interpretations of domestic life within the industry-dominated communities of Port Glasgow and Townhead.

BET LOW

One of the most significant figures of the period in the treatment of industrial and urban subjects is Bet Low, born in 1924 in Gourock. She attended Glasgow School of Art during the Second World War, and shortly afterwards was employed to make stage designs for the Unity Theatre in Glasgow. She co-founded the New Charing Cross Gallery. Her style and

approach at this time was also closely linked to that of Joan Eardley, both of them sharing a debt to Josef Herman's aesthetic.

Low felt the influence particularly of J.D. Fergusson through exhibiting with the New Scottish Group, of which Fergusson was president. She reportedly found Fergusson a great inspiration and seems also to have shared his keenness for art outside Scotland. Cordelia Oliver also records her as often visiting London, where she would have kept abreast of artistic developments in the post-War years and beyond. [15]

In her graphic work particularly over this early period she seems indebted to the manner and subjects of Muirhead Bone, whilst injecting Bone's searching line with a greater degree of expression and freedom. From 'Cuddy's Park' Glasgow (1946) **[Fig. 81]** shows a general panorama of Glasgow which includes in the background chimney stacks, electricity pylons and large areas of tenement buildings. The foreground is dominated by railway lines, telegraph poles and a small group of men who are working by a timber shed. Stylistic traces of Bone are evidenced in the attention to detail, the preference for a fairly sparcely populated foreground, and the device of contrasting grand areas of the city (indicated by the church spires in the back- and mid-ground) and the more industrial, often neglected areas of a city, such as is found in Bone's Leeds Warehouses (1905) **[Fig. 24]**.

A work which illustrates Low's more expressive and simple style is Pinkston Coal Depot, Glasgow (1945) **[Fig. 82]**, which focusses on the converging lines of a railway and coal carriages. Geographically, Low's

subject is very close to the area depicted by Ian Fleming in Industrial Landscape, Glasgow (1946) **[Fig. 70]**. An overhead and seemingly neglected crane lies in the background. Indeed the whole scene is relatively inactive, a gloomy sky emphasising the vacated landscape. Other neglected areas depicted by Low, such as Port Dundas, the Canal, Glasgow (c.1945) **[Fig. 83]** and Derrick, Port Dundas, Spiers Wharf, (1946-7), show a lineage directly from Muirhead Bone, as he drew in precisely the same area.

One noticable feature, perhaps due to Low working as a woman in these industrial areas, is the sense of distance which Low keeps. Her viewpoint often seems to be from a bridge overlooking the rail-line or from a hill. This characteristic is also noticable in Joan Eardley's treatment of specifically industrial subjects in Glasgow of around the same time, for example, the ink and pastel drawing Shipyard with Cranes, Port Glasgow (c.1951) **[Fig. 79]**.

Low is much more of a figure artist than Bone, a fact related to her involvement with the Unity Theatre and the Clyde Group, as well as her contact with the European figurative tradition first-hand through artists such as Josef Herman. The artists involved in the Clyde Group held an exhibition at the Iona Community House in 1950, which was reviewed by Alec Sturrock in Scottish Art and Letters, where the reviewer noted Low's "...real talent for evoking the atmosphere of rural or industrial scenery," and the fact, too, that her works were, "...remarkably evocative of the beauty which is to be discovered at the heart even of a big city's industrial confusion." [15] So we have a clear indication that Low's direction was appreciated unequivocally as that of an artist of industry

and urban life. On the opposite page in Scottish Art and Letters, an industrial subject, Port Dundas, was reproduced in black and white. Her works usually emphasise a strong social concern, for example, in the linocut Peace Petition (1954), where Low comes close to the style of German Expressionist prints of the 1920s. Men, women and children sign a peace petition and brandish banners in a city square. Reference to the 'Northern Peace Committee' show that it likely depicts a rally in Glasgow. The choice of subject is certainly related to her involvement with the Artists for Peace movement, participating with her husband, Tom Macdonald, in an exhibition in Poland. [17] This exhibition also included work by Léger and Picasso, whose famous dove symbol, executed for the movement, Low picks out on a banner in Peace Petition.

Although graphic work was an important part of Low's output, she has also produced some major paintings of industrial subjects. A particularly strong work is Blochairn Steelworks (c.1946) **[Fig. 84]**, which also tackles its subject somewhat at a distance, and in its use of dark colours from which spring highly luminous and acrid yellows, reds and whites, seem to evoke the romantic industrial subjects of Philip de Loutherbourg, such as Coalbrookdale at Night (1801). The silhouetted steelworks depicted, significantly, at night when the rest of the city is at rest, hides any particularised activity. Low inadvertantly records the fact that post-War production in the steelworks continued throughout the night in order to maintain a high output. Atmosphere rather than detail is Low's aim, emphasised by the fact that the steelworks are observed from afar.

At the end of the 1950s, though, Low's interest in industrial and urban subjects declined steeply and she turned her attention to the Scottish landscape at the expense of industry.

Throughout this chapter we have seen that the recording of industry in Glasgow was a constant subject in visual art of the 1940s and 1950s, although precedents are numerous. Most relevant is the graphic work of Muirhead Bone, but the tradition is strong throughout the nineteenth and twentieth centuries, with artists such as William Simpson and later James Kay using the Clyde and its industry as inspiration in numerous works. Relatively rare examples of a woman's image of industry before the Second World War are represented by the wood engravings of Mary Viola Paterson (1899-1981), such as Shipyard and Crane on the Clyde (c.1930) and Empress of Britain (c.1936). However, the main difference between these artists and the Glasgow grouping around the Second World War up to the 1950s is the explicitly political orientation of the artists involved, particularly Bet Low and Tom Macdonald.

That this movement did not produce more familiar and ambitious art works (that is, nothing on the scale of Spencer's Clydeside panoramas, or William Bell Scott's Iron and Coal) may be due to the fact that the artists had to work somewhat against the art establishment in Scotland, who have rarely encouraged depictions of indigenous work environments. Also their work was deliberately undertaken informally, as drawings or prints, or was intended for public events such as theatre backdrops. Within the fine arts proper, industrial subject matter had not been recognised as a genre in its

own right. The artists themselves produced works other than those of industry, such as portraits, landscapes and still lifes. As Douglas Gifford notes of the Glasgow writers of the 1920s and 1930s, they were all "...deeply political, and almost all socialist or communist, as well as being Nationalist also." [18] However, perhaps the literature of the time, with its romantic, almost nostalgic reverie for times past, held more of a popular appeal than the sketchy, informal art of Low, Macdonald, Bain and others, which never filled so large a part of Scotland's perception of itself in the arts. Nevertheless, the art of these individuals did show the writers on art and industry of that period, such as MacDiarmid, Ian Finlay and Fergusson himself (see Part One, Chapters 3 and 4) that an art truly committed to industry within Scotland was possible. It is therefore likely that the existence of such a group of artists was not co-incidental at the very time that these writers above were publishing on the theme of industrialisation in periodicals such as The Modern Scot and Scottish Art and Letters.

NOTES

Part Two, Chapter 6. Politics and Painting in Glasgow after 1940

1. This transition is discussed in many standard analyses, for example, R.H. Campbell's The Rise and Fall of Scottish Industry, 1707-1939, Edinburgh: John Donald, 1980.

2. Meirion and Susie Harries, The War Artists. British Official War Art of the Twentieth Century, London: Michael Joseph, 1983

3. Scottish Art and Letters, Vol.I, No.1, 1944, Glasgow: MacLellan

4. Tom Macdonald 1914-1985. Paintings, Drawings, and Theatre Designs, Glasgow; The Third Eye, 1986

5. Donald Bain. A Modern Scottish Painter, 1950, Glasgow: MacLellan, 1950, p.10

6. Ibid., p.15-16

7. Ibid., p.16-17

8. Ibid., p.16

9. Details of the Clyde Group are given in a letter by Bet Low to Duncan Macmillan, 23 March, 1992.

10. As explained in Low - Macmillan correspondence, ibid. One example of the political aspect of the Clyde Group is John Kincaid's poem, To Tom Macdonald which was published in Measures for Masses, 1944. Kincaid was also a member of the Clyde Group.

11. Dennis Farr, New Painting in Glasgow 1940-46, Edinburgh: Scottish Arts Council, 1968

12. Low - Duncan Macmillan correspondence, op. cit.

13. Douglas Gifford, The Dear Green Place? The Novel in the West of Scotland, Glasgow: Third Eye Centre, 1985

14. For a discussion of the role of the industrial novel in Scotland, see Manfred Malzahn, "The Industrial Novel", The History of Scottish Literature, Vol.4. The Twentieth Century (Cairns Craig, ed.), Aberdeen: Aberdeen University Press, 1987.

15. Bet Low. Paintings and Drawings 1945-1985, Glasgow: Third Eye Centre, 1985, p.5

16. Scottish Art and Letters, Vol.1, No.5, op. cit., p.32

17. Cordelia Oliver, Bet Low, op. cit., p.5

18. The Dear Green Place? The Novel in the West of Scotland, op.cit., p.6

PART TWO: Chapter 7

THE SCULPTURE AND GRAPHIC WORK OF EDUARDO PAOLOZZI

In Part Two, Chapter 2, which discussed the work of Muirhead Bone, the artist poses a rhetorical question regarding modern subjects in art. He asks: "Did we elder Scottish artists not play for safety too much (in the choice of subjects and the like)? Perhaps we did not make a strong enough effort to wrest an art of our very own from conditions of life as it was lived around us..." [1] Of all the Scottish artists which have been discussed in this thesis, the Scottish sculptor and printmaker Eduardo Paolozzi (1924-) has addressed this problem most vigorously throughout his career.

Paolozzi is the most internationally recognised artist discussed in this thesis. His work has been discussed widely with differing emphases in many places, yet the most dominant theme is his relation to modern-day objects, consumer culture, technology, industry and science. This chapter attempts to clarify the developments and changes in the artist's perception of industry in particular, as it is evidenced in his work. There is also an analysis of the relevance of Paolozzi's Scottish years to his subsequent art. Furthermore, this chapter aims to highlight connections and relationships in attitude between his work and the work of other artists discussed previously.

The Early Years

As a preliminary, it is important to establish the strength of Paolozzi's connection to his early home environment of Scotland. Paolozzi (born on 7 March, 1924 in Leith, the coastal port adjacent to Edinburgh), has on many occasions recalled early experiences of a relatively deprived upbringing in the depressed years before the Second World War and the austere years after 1945. A common approach used by critics with regard to Paolozzi's early years is to describe the perceived values of the Scottish capital at that time, as a "class-conscious [..] indulgent [...] dream city," [2] and describe the art prevalent at the Edinburgh College of Art as a "limp Impressionist imitation". [3] The implication being that Paolozzi, who attended night classes in art in 1943, in some way explicitly rejected this set of attitudes. Furthermore that Paolozzi wanted to become an artist "...anywhere rather than in Scotland." [4] In the context of the discussion here, it is useful to look instead at Paolozzi's actual experiences in Edinburgh at a time in his life when fine art as a profession was not his preferred career. This period is described by Thomas Lawson thus:

> "...he would have started taking note of the world around him during the years of the Depression, and done so in Edinburgh's dockland, an area still trying to recover from the damage inflicted upon it in the thirties. Growing up among the working poor in Scotland, he would have experienced directly an estrangement from the official Britishness of London and the South." [5]

Paolozzi himself does not interpret his leaving Edinburgh as being due to any perceived absense of industrial subjects in the Edinburgh art world. [6] Whilst he was resident in Edinburgh, Paolozzi had not followed a

traditional art training and had not intimated any explicit early desire to become an artist. Thus it is unlikely that his move from Edinburgh to London was a direct rejection of the art being produced in Edinburgh, although, as this thesis demonstrates, there was indeed very little art which attempted to confront the reality of an urbanised and industrialised Scotland. It was rather the pull of other artistic centres, most particularly Paris as undoubtedly the focus of art life in Europe during the 1940s, rather than the push of Edinburgh which caused Paolozzi to move.

Two aspects of Edinburgh life experienced by Paolozzi in his early years remained with him and vitally affected his subsequent art. Firstly is the influence of the docks at Leith, a major shipping port. The considerable industrial presence of Leith Docks with its large steel-hulled ships, loading areas, stacked cargo, cranes and the like, would have made an impact on the young Paolozzi that was later reflected in his approach particularly to sculpture, which uses materials and techniques rooted in heavy industry. This is discussed more fully below.

Secondly, the artist's concerns in printmaking and collage can similarly be associated with the amount of ephemeral literature which the artist recalls from his early years in Edinburgh. The Edinburgh of his childhood was, "...a city where nothing was thrown away." [7] and provided the inspiration to preserve and gather material for art. This process is at the root of his method. Paolozzi has stated that, "Being brought up in a city, I always read pulp magazines, including stories of air battles and science fiction. I think that machines and fantasy go together." [8]

Paolozzi has sought throughout his career as an artist to retain a sense of the marvellous and fantastic, associated with his early immersion in popular, pulp literature.

Thus although Paolozzi must remain a problematic figure in relation to his home country, in that little of his output has been in or directly about the Scottish industrial experience, the early influence of Edinburgh can be seen as an abiding factor in his subsequent artistic production.

SCULPTURE

Paolozzi's upbringing, in close proximity to Leith Docks, requires further analysis as it clearly had a significant impact. He noted in a public lecture of 1987 that the battleships docked at Leith during the 1930s were for him a forceful symbol of omnipotence. [9] This comment was accompanied by a slide of the collage, Port Maritime (1946) **[Fig. 85]**. This thesis has already discussed the powerful response to the industry of shipbuilding engendered in artists such as Muirhead Bone, for example in The H.M.S. "Lion" in Dry Dock (1917) **[Fig. 38]**, a subject which lay only a few miles away from Leith, at Rosyth on the opposite side of the Firth of Forth (see Part Two, Chapter 2). Similarly, J.D. Fergusson's Portsmouth Docks series also of 1917 inspired the artist through a similar subject. Paolozzi had other early contacts with Edinburgh heavy industry, working firstly in a glass factory and secondly at the now demolished Waverley factory of the Scottish Motor Traction Company (S.M.T.) where he assisted manufacturing tank transporters before and during the Second World War.

Just a few years before Paolozzi started his career in art, J.D. Fergusson had commented on connections between imagination, engineering and the artist:

> "...the artist can only make his research for form by *seeing*. By his research the artist sees *in advance* the functional form necessary for the best results in Queen Elizabeths, submarines, aeroplanes, etc. The real artist is always *a research man*, and not as people seem to think, *an imitator of recognised forms*..it has not even occurred to most people that there is *emotional accuracy*, and that all real precision is *emotional*, in other words human. Mass production produces an amazing standard of

mechanical accuracy, but when work has to be first class it has to be done by a really sensitive emotional human being." [10]

Although Paolozzi is hardly unusual in gaining experience at a young age of adult working life, it is notable that both the glass factory and especially the S.M.T. works were the site of mass produced objects. They would have made a powerful impression on any young person, but became for Paolozzi an environment to which he would return, both as a means to produce sculpture and as a site for new imagery and source material.

A rather more speculative proposal is that this contact may also have influenced Paolozzi's formation of industry as a source of irony and paradox. The basis for this proposal is that Paolozzi's Italian father was interned as an enemy alien during the Second World War, along with many other Italian immigrants who were in Britain in 1939. The irony that the Scottish-born Paolozzi had been working on the production of tank transporters for the Allies at the S.M.T. factory, whilst his father was viewed as an enemy may have instilled an awareness of the paradoxes involved, either at the time or at a later date. Paolozzi has often shown an awareness in his work of the dual aspects of industry, certainly ever-wary of its negative or paradoxical connotations.

Industry as Symbol and Process

After formal training at the Slade School of Art (1945-7), a crucial stay in Paris (1947-9) followed by teaching positions at Central School of Art

and Design (1949-55) and St. Martin's School of Art (1955-8), Paolozzi emerged as a significant British sculptor. His working method over the period 1956-61 became a highly original and conceptually complex way of encapsulating contemporary imagery into his art. It consisted of pressing industrial machine parts and other modern objects or fragments into wet clay, which then became the mould for wax impressions to be made. When firm, these sections of wax were cut and assembled by the artist into sculptures, usually in a tower-like form, before being cast into bronze. Major works such as Icarus (1957) **[Fig. 86]**, His Majesty the Wheel (1958-9) and Tyrannical Tower (1961) **[Fig. 87]** were produced over this period.

The sculpture Icarus represents an integration of many important ideas which illustrate Paolozzi's aesthetic. Cast in bronze, it does not reject a traditional sculpture material, and its subject, a mythic hero, is portrayed as a standing figure, a familiar type in sculpture. However, Paolozzi re-translates traditional aspects within the terms of reference of modern experience. Whilst the isolated figures of Giacommetti are echoed in Icarus, and signal the strong influence of this artist on Paolozzi, the latter rejects the immediate touch of the artist's hand on the clay (which is translated into bronze in the sculpture of Giacometti). Instead, Paolozzi uses a more mechanical and depersonalised process by impressing real objects into clay before they are cast into bronze. The effect is one of industry rather than personality, offering an original but related alternative to the existential orientation of Giacometti. The Icarus figure and related graphic works such as Standing Figure (1956, screenprint) do seem vulnerable and isolated in a similar way to Giacometti's standing figures. [11]

A favourite photograph of the artist is one which shows a trough of plaster limbs used by Rodin in his studio. [12] Paolozzi adopts this method where, like Rodin, earlier sculptures can be transformed and re-assembled. As Middleton has written of his use of collage, this library of images are "...sheets of an alphabet of elements awaiting assembly." [13] Thus we can see that there exists a parellel between Paolozzi's method in sculpture and his collage technique (examined in the following section). The technique of pressing machine forms into clay, prior to using them as sculptural elements moves towards collage in that partially arbitrary components are created and provide set forms from which to work. As early as 1946 Paolozzi had been merging sculptural sources, that of armatures illustrated in a text book (Modelling and Sculpture by Albert Toft), [14] with cut-out photographs of machinery, to create collages such as *Nike de Paionios* (1946). It should be noted the strong parallel that exists between both the method of construction and our response to these figures and that engendered by Victor Frankenstein's monster in Mary Shelley's novel of 1816. Shelley's monster was itself a recycling of once-living bodies and a metaphor for nineteenth-century scientific materialism taken to extremes. As the inventor writes in the novel : "I collected bones from charnel houses and disturbed, with profane fingers, the tremendous secrets of the human frame. In a solitary chamber...I kept my workshop of filthy creation." [15] As Middleton has noted, "Paolozzi's figures of 1956-61, however, prove themselves less horrific than touching, less menacing than pleading. They proclaim the hollowness of the awesome figurehead...by reason of its very nature and the blows of fate it has suffered." [16] Frankenstein as an image does appear directly in a few works of Paolozzi's but usually in a comic form, such as "Will the Future Rulers of Earth come

from the Ranks of the Insects?", (Zero Energy Experimental Pile, offset lithograph and screenprint, 1970) **[Fig. 88]**.

Seeing the products of industry as being independent of, and perhaps threatening to, humanity, as in the Frankenstein story, is a dominant theme in the writing of Thomas Carlyle. The Scottish historian and moralist was aware of the material good of 'Mechanism', which "...has now struck its roots down to man's most intimate, primary sources of conviction; and thence is sending up, over his whole life and activity, innumerable stems, - fruit-bearing and poison-bearing." "But though Mechanism, wisely contrived, has done much for man in a social and moral point of view, we cannot be persuaded that it has ever been the chief source of his worth or happiness." And ultimately "Not the external and physical alone is now managed by machinery, but the internal and spiritual also...Men are grown mechanical in head and in heart, as well as in hand." [17] Other nineteenth-century precedents can be cited in this respect, as the psychological problems when technology is misused by humankind is also central to Robert Louis Stevenson's The Strange Case of Dr. Jekyll and Mr. Hyde (1886), a novel which shares Paolozzi's interests in duality and opposition in the context of science. Similarly, Rudyard Kipling's poem McAndrew's Hymn continued this concern for humanity in a mechanised (and Scottish) context, in asking, "What I ha' seen since ocean-steam began/ Leaves me na doot for the machine; but what about the man?". [18] The devastating physical assault on humanity which industrialism represents has never been far from Man's conscience. So Paolozzi can be seen to be re-working an established nineteenth-century position towards the machine in relation to society, yet interpreting it in twentieth-century terms.

The awe engendered by mass production has been made entirely explicit by Paolozzi, who writes: "Giant machines with automatic brains are at this moment stamping out blanks and precision objects, components for other brains which will govern other machines." [19] This was said during the period in which Paolozzi was producing bronze works such as AG5 (1958), made using the same method as Icarus which included "stamping out" shapes in clay. His evoking of an anthropomorphic quality to machinery relates in part to a 'Brave New World' conception based in science fiction, but also recalls the imagery used by Carlyle in "Signs of the Times" where he hopes "...that Mechanism is not always to be our hard taskmaster, but one day to be our pliant, all-ministering servant." [20]

The bronze works from 1956-61, for example, Krokodeel (1956) **[Fig. 89]** or Cyclops (1957), are direct descendents of the "Men grown mechanical in head and in heart," decried by Carlyle. We all benefit from living in a society where the labour is divided, however, as another important nineteenth-century moralist, John Ruskin, had pointed out: "It is not, truly speaking, the labour that is divided, but the men:- divided into mere segments of men - broken into small fragments and crumbs of life." [21] The mechanisation of humanity's external and internal functions is a shared concern between Paolozzi and Ruskin as this passage, also from "The Nature of Gothic" shows:

> "Men were not intended to work with the accuracy of tools, to be precise and perfect in all their actions. If you will have that precision out of them, and make their fingers measure degrees like cog-wheels, and their arms strike curves like compasses, you must unhumanize them...Let him begin to imagine, to think, to try to do anything worth doing; and the engine-turned precision is lost at once." [22]

The citing here of Carlyle and Ruskin, who have already been discussed in previous chapters above, illustrates some important shared concerns. Although these parallels with some of the major nineteenth-century British thinkers on art and industry are by association only, as Paolozzi himself has not explicitly discussed these writers, the connections in philosophical terms are so close as to demonstrate how carefully the artist continues their questioning of the basic premises of industrialised society.

Anthropomorphic references seem central to His Majesty the Wheel (1958-9) which, like Icarus is a somewhat vulnerable figure. Its title relates obliquely to industry in that it is derived from an American newspaper which was relating a contemporary scandal concerning the prominent union boss Jimmy Hoffa and is thereby associated with the slang term "big wheels" in industry. However, like most of these bronze works, strongly archaic and ancient symbolism is united with contemporary subjects. His Majesty the Wheel resembles a Pictish standing stone: thus giving rise to associations with icons from a lost civilisation from Scotland. In the wider context, it could be seen as a rather pessimistic icon for the machine age, in the context of the then current post-war nuclear threat and Cold War politics. It is typical in Paolozzi's work to employ a multiplicity of sources.

Paolozzi has said in a recent essay that urban culture in the twentieth century is "...primitive, highly ritualistic and incredibly unsophisticated," [23] an observation which relates to an earlier statement that "Rational order in the technological world can be as fascinating as

the fetishes of a Congo witch doctor." [24] The fetishistic quality of technology existed as a force in earlier British sculpture such as Jacob Epstein's Rock Drill (1913-14), yet an interesting Scottish precedent for the aligning of modernisation and primitivism is that by the Scottish printmaker William McCance (discussed in Part Two, Chapter 4). In the linocuts Machine Gods (1923) **[Fig. 50]** and The Engineer, His Wife and Family (1925) **[Fig. 51]**, McCance presents strong, frontal images of technology which look very much like prototypes for Paolozzi's blend of machine aesthetic and primitivism. In his concern with combining the ostensibly sophisticated with the ostensibly primitive, Paolozzi engages with important themes of obsolescence and history, especially in that many products of modern technology soon become obsolete whereas archaic artifacts in museums maintain their use value as aesthetic objects. [25]

With regard to 'primitivism' in the work of Paolozzi, it is important to note the close connection which exists between his and that of Wyndham Lewis; an influence Paolozzi has verbally acknowledged. This most likely stems firstly from his connection with Lewis through William Johnstone and the Central School of Art and Design, and secondly from the fact that Paolozzi would have seen the Tate Gallery exhibition, Wyndham Lewis and Vorticism in 1956. This included good examples of Lewis's Vorticist work, with 155 works in all by Lewis and a selection of other Vorticists' work such as Roberts, Wadsworth, Nevinson and Dismorr. Industrial subjects by Lewis included Two Mechanics, (c.1919, cat.50) and A Battery Shelled (1919, cat.116). There are passages in Lewis's writings which support Paolozzi's interest, for example, in 'The New Egos', he writes, "All clean, clear-cut emotions depend on the element of strangeness, and surprise and

primitive detachment. Dehumanisation is the chief diagnostic of the Modern World." [26] The issues Lewis raises, such as a strangeness rooted in Surrealism, the use of non-Western cultures and dehumanisation are all central to Paolozzi's concern with modern life. Similarly, Point 7 of the 'Manifesto II', Blast 1 states that, "The Art-instinct is permanently primitive," [27] and thus indicates a shared awareness by Lewis and Paolozzi of the inter-relatedness of modern and archaic subjects.

The Human Body

The world as fashioned by industry and technology may be considered to have two contrasting characteristics. On the one hand it is a product of the human mind and an extension of human capacities whilst on the other it is seen as almost independent of, and perhaps threatening to, humanity. Both characteristics emphasise the mechanised world's relationship to the human figure and the necessity of understanding machinery is at bottom the necessity of understanding ourselves. [28] The pertinence of this in regard to Paolozzi is through his affirmation of a moral dimension to industrialised society, rather than merely an interest in the formal appearance of machined products. This, furthermore, shows his continuity with the moralising intent of Thomas Carlyle and John Ruskin (discussed in Part One, Chapter 1).

Source material as varied as Leonardo's flying machines to satellites in space and artificial limb technology are examples of Paolozzi's use of industrial subject matter. The artificial limb as an image appears in many

of Paolozzi's prints. The prosthesis has been one of society's most inventive products, uniting technology intimately with those who use one. Paolozzi seems intrigued by the transition from organic material (human tissue) and inorganic material (the dynamos, wires and components of the reconstructed limb). Lawrence Alloway, a member of the Independent Group and close associate of Paolozzi in the 1950s and 1960s, discussed artificial limbs in the sculptor's work: "The ready-made elements become intimate possessions, adjuncts of the human, and not, as in surrealism, bizarre, hallucinatory, or displaced...It is the naturalness of the mechanical arm which moves Paolozzi." [29] The point where man meets machine and the application of scientific knowledge has been a central concern of Paolozzi so the artificial limb is a natural metaphor in many ways for humanity having through necessity to cope with science, to use it, to manipulate and to humanise it.

Factory production & anonymity

Paolozzi's appointment as visiting professor for sculpture and design in Hamburg, 1960-62, provided further direct links with industrial locations in that he took his students for extended visits to shipyards, sawmills, and other working environments. Germany provided abundant opportunities to explore large-scale industries, given its dependency, since the Industrial Revolution, on shipbuilding, coal mining and steel manufacture. German industrialisation paralleled in intensity the industrialisation which had concurrently taken place in Scotland. One significant difference, however, is that German culture had absorbed industrialisation in the twentieth century in the form of the Bauhaus movement, and more generally

in the development of a machine aesthetic. In cultural terms, Germany provided a context in which Paolozzi could utilise that tradition. It is possible that Paolozzi gained a sympathy for such a synthesis between art and industry through his six years, between 1949 and 1955, he had spent under William Johnstone, the Scots Principal of Central School of Art and Design. (Johnstone's interest in the Bauhaus and industrial design in British art school education has been discussed in Part One, Chapter 5.) It is likely that through Johnstone, Paolozzi became acquainted with the work and the importance of the Bauhaus.

From the early part of the 1960s, Paolozzi explicitly sought to place sculptural activity as close to factory production assemblage as possible. In an artist's statement of 1963 he chose to highlight "...Wooden shapes cast in gun metal / by engineers foundries / assembled like ships by / BOLT AND WELD...The search for archetypes / to aid the / metallization of the / dream." [30] As Finch says, the artist "...is himself the contractor and his function is to take the decisions." [31] This both invoked the possibility of anonymity, whilst paradoxically still being fundamentally a presentation of individualised sculptures, not mass-produced objects. In this respect it relates to the strategies of the Russian Constructivists in the 1920s to make links between sculpture and engineering. Acknowledgement of the Constructivists is made explicit by Paolozzi in Poem for the Trio MRT (1964) **[Fig. 90]**, where the initials stand for the Russian artists Malevich, Rodchenko and Tatlin. Paolozzi began to use the engineering firm C.W. Juby in Ipswich, to cast Poem for the Trio MRT and Hamlet in a Japanese Manner (1966), among other pieces. This change in working method, for which Tyrannical Tower (1961) **[Fig. 87]** and Twin

Towers of the Sfinx-State I (1962), are transitional pieces, represented a fundamental move from the Giacommetti-inspired encrusted period to an employment of entirely machine-produced elements. The result increased the notional distance between the artist and the final work. [32] A humorous machine aesthetic replaced a more historically-orientated aesthetic. Paolozzi became engaged in creating sculpture which used a variety of mass-produced industrial products and parts. He made his interests explicit in the following statement, contemporary with this period of work: "...the ship, the aeroplane, the motor car are all made from components, component parts really. They all have to be constructed, and one uses the same means." [33] In works such as Domino (1967-8) the factory-made aluminium pieces could be put in random positions, as the artist refused to determine one fixed relationship of parts. The resulting sculptures may be likened to components ready to be assembled by an engineer or inventor. It brings industrial creativity to the level of basic human inventiveness, such as a child playing with toy bricks. Locating creativity on a number of levels, from children to engineers, is central to Paolozzi's interdisciplinary and synthesising approach, rooted in Dada, Surrealism and the techniques of collage and assemblage.

Factory procedures can be roughly defined as based on large-scale standardisation and interchangeability in the production of machine parts and other mass produced objects. Attendant to assembly-line production was the democratisation of the object. Walter Benjamin's seminal essay of 1936, The Work of Art in the Age of Mechanical Reproduction had brought to prominance the democratising effects that mass production would have also on artistic imagery. In an interview with Richard Hamilton in 1965,

Paolozzi defended his move from sculpture based on the human form to more abstract sculptures which represented more reliance on engineering processes:

> "One has a reversal which is interesting - by risking anonymity, one may find personality. I am using anonymity in the sense that the actual raw materials...are things that nobody would give a second glance. I don't think people would actually identify them directly with art...one is using flat strip angle channel, and part of the battle now is to try and resolve these anonymous materials into...a poetic idea really." [34]

Paolozzi used a skilled welder to construct his sculptures of this period. Something of a paradox is evident in the reception of Paolozzi's work in the engineering factory, as evidenced by Herbert Read's singular praise for the sculpture of this period: "Among the hundreds of sculptors who have emerged since 1945, it seems to me that there is only one who might claim to have invented a new *style* - Eduardo Paolozzi." [35]

The move from the studio, the dominant location for the work of the 1950s, to the engineering firm is, as Paolozzi acknowledges, a move from "...active to passive"; from the quiet, personal environment of the studio to the "...honest and dramatic" world of industry. [36] Paolozzi readily accepts collaboration in his work:

> "One's so familiar with the knowledge in architecture that you have to use a good team...If you're able to include, when you talk about technology, the building of a classic airliner these things are absolutely impossible without whole teams and a whole tradition. But I can't understand why you have to make two catagories: hand-made art and great art that's made by teams of anonymous people." [37]

Paolozzi was explicitly aware that the transition from the studio to the factory also involved a translation from two to three dimensions:

> "From a series of elements in wood, of accorded dimensions translated into metal, these pictures duplicated and multiplied become component parts. Multi-useful fort-like presences, silhouettes of strength, edges hard and sharp. Assembly decided on the floor of the workshop; creative decisions on several levels. Spontaneity meets discipline." [38]

The discipline refered to is largely the skill of those trained in a specialised society: the welder, the caster, or the industrial designer. However, the use of the word 'Dream' in the title by Lawrence Alloway, is significant in that it illustrates the importance of the imagination and Surrealism when dealing with Paolozzi's attitude towards the machine.

In an interview in 1971, Paolozzi recognised that the imput of intermediates within modern means of production could have a profound effect, and a cosetting one, concerning the quality or otherwise of that original idea: "...the machinery protects the inefficient, the amateurish because there are so many compensatory devices. So that the bad photographer will be rescued by the art editor, the incompetent reviewer will be rescued by the man on the cutting-room floor." [39] Factory production, especially munitions and arms production, is explicitly a concern in Bombs (1971) **[Fig. 91]**, (the same year as the above interview). This is of nine identical aluminium bombs variously inscribed with the initialled words "F.E.E.", "F.I.", "F.O." and "F.U.M." The dark humour fuses a propensity in administration for obscure acronyms, large-scale military production, and a children's story, and as such is typical of Paolozzi's multifaceted approach. Its irony is obviously directed at our militaristic

society and marks the ideological direct negative of early artists' promotional works such as Muirhead Bone's The Hall of the Million Shells, (1917) **[Fig. 36]** (discussed in Part Two, Chapter 2).

Recent Sculptures

Thomas Carlyle's concern with industry focussed on the extent to which it invaded the body on a multitude of levels, chiefly through physical debasement and by exerting a mechanical influence upon 'human' responses. Carlyle's concern with both the external and internal consequences of industry is continued with Paolozzi through his concentration on the human figure, especially the head. As Paolozzi has written: "A lot of man's experience are coming through machines either being destroyed by machines or credibility, news, violence are all seen through the cathode ray tube." [40] In this context, the human head has remained constant in his work from Mr. Cruikshank (1950, bronze), Crash Head (1971, bronze), and most recently an extended series including Portrait of an Actor (for Luis Bunuel) (1984, bronze) and Electric Bishop (1984, bronze) **[Fig. 92]**. [41]

Paolozzi's The Artist as Hephaestus (1987) **[Fig. 93]** is a full length figure cast in bronze with a recognisable self-portrait head. The figure holds an obscure mechanism in his hands. A related version exists, called Self Portrait with Strange Machine (1987) making the connection to industry more explicit, as Hephaestus, the Greek counterpart to the Roman god Vulcan, was the god of fire and metalwork, as such traversing both the disciplines of sculpture and industry. The cybernetic figure, according to the artist is to be interpreted as both critical of and confused by the

'strange machine'. [42] One interpretation is that Hephaestus the maker presents for our meditation a mechanism he has made himself but no longer understands. The metaphor may be read as a prescriptive warning that the momentum of industrial invention has delivered us to a state we are able satisfactorily to assimilate and control. When science becomes incomprehensible it, like art, becomes the object of mistrust. As Paolozzi has stated as his position: "It is debatable whether one can have a totally emotional attitude toward science in the same way one can have a totally emotional attitude toward nature in general." [43] The above discussion goes some way in demonstrating the true complexity and elusive nature of Paolozzi's treatment of industry in his practice as a sculptor. The second part of this chapter will look at the relationship between industry and Paolozzi's work as a graphic artist.

THE GRAPHIC WORK

Paolozzi's methods in printmaking do not use industry in the same way as his sculptural production, such as casting, welding and other industrial processes. However, in terms of content and aesthetic, his printmaking is a vital aspect of his production as an artist and is relevant to the theme of industry. He employs imagery chosen from a variety of sources including anatomical and technical illustrations and photographs of industrial and mass produced objects, all transformed in the process of making his prints and integrated within prints which also include many other disparate source material.

Post-war Britain

Paolozzi's continual use of printed material has already been cited above in the Introduction to this chapter as being linked to his early upbringing in Edinburgh. As Ray and Gwen Shaw have observed, concerning Britain after the Second World War: "The popularity of the catastrophe movie and of science fiction reflected a widespread anxiety and a desire to explore, if obliquely, the problems of responsibility and control which often form the subtext of the best science fiction." [44] The economic situation in Britain after the Second World War saw British industry in terminal decline. From 1944 to 1947 Paolozzi was resident in London and Oxford, and the sense of decline over that period must have in itself been an incentive to go to Paris as he did in the summer of 1947. His period at St. Martin's and the Slade seem to have had little direct relevance to his

work, although it was at this time that he began useful friendships with Nigel Henderson and William Turnbull, among others. We can contrast the spirit of post-War London as Paolozzi experienced it for the first time with the impressions of Muirhead Bone when he made the transition to the capital. The demolition and reconstruction work which Bone focussed on as his subject was a voluntary programme of urban renewal initiated by Victorians planners, continuing into the Edwardian period. It was entirely different from the inforced restructuring of inner London after the destruction caused by the German air-raids. This was done with little of the spirit of optimism attendant to earlier phases of renewal. Britain's experience of having passed its industrial zenith, where much of the past source of wealth was becoming obsolescent, may have partly contributed to Paolozzi's less optimistic view of industry. This led him to be more sympathetic to the darker landscape of nineteenth-century criticism exemplified by writers such as Charles Dickens and Elizabeth Gaskell.

In April, 1947, the critic Cyril Connolly described the pervasive atmosphere of post-War London in terms which give a good indication of the spirit which Paolozzi would have experienced. He described London as, "...the largest, saddist and dirtiest of great cities, with its miles of unpainted half-inhabited houses...its antiquaries in America, its shops full of junk, bunk...under a sky permanently dull and lowering like a metal dish-cover." [45] The words "junk" and "bunk" by Connolly were to become central terms for Paolozzi in his art. Paolozzi has himself recalled, "There was an austerity in publishing. There were no Sunday supplements and no television sets...a curious, starved, artificial society." [46] Paolozzi's subsequent move to Paris from 1947 to 1949 should be understood in this

context as it provided him with first-hand contact with some of the most important European artists also attempting to absorb the modern world and industrialised society into their own work, such as Léger and Picabia. As Paolozzi has written,: "England was very run down after the war. Looking at another kind of culture in a rather direct way was due to Max Ernst and the Surrealists..." [47] Most significantly, Léger arranged for him to see his seminal experimental film *Ballet Mechanique*, which explored those very issues of mechanisation and humanity that became central to Paolozzi himself. In his association with Léger, Paolozzi is here positioning himself in relation to the same European spirit which had previously inspired William McCance and J.D. Fergusson.

On his return from Paris in 1949, Paolozzi continued working and became involved in the Independent Group in London. The Independent Group, which comprised sociologists, academics, writers and artists, was among the first to acknowledge collectively the worth of society's mass-produced objects, symbols of the technological and manufacturing revolutions, and to look at ways they could be absorbed into contemporary art and culture. In this they continued many of the fundamental ideals of Patrick Geddes. The Group met at the Institute of Contemporary Art, which had been set up by Roland Penrose and Herbert Read to encourage avant-gardism in British art. They approached the 'media landscape' of the twentieth century with a spirit of enquiry based loosely on sociology and an informed communal interest. Since his return from Paris, Paolozzi continued his practise of collecting scraps of pulp literature and advertising which he then presented before the Independent Group in 1952 in the form of a loosely structured presentation called BUNK. The

presentation was based on the images in the scrapbooks, much of which was taken from American magazines and comics over the period 1947 to 1952. It seems that this presentation was not in fact a lecture, as Paolozzi did not verbally articulate the visual ideas he showed to the Group. The playfulness and random quality of this selection of images and the uses it could be put to was recently commented upon by a fellow member of the Group, Richard Hamilton:

> "He [Paolozzi] brought a pile of magazines and scrapbooks and shoved them under an epidiascope...when they were blown up on the side of a wall they had a completely different significance and I think Paolozzi was as surprised as anyone else...I don't think he ever felt them to be works of art. They were research material and a collection of stuff...It was enormously important." [48]

Whatever the status of the images shown, they include semi-comical juxtapositions, for instance, a leaping ballet dancer beneath a fighter plane. It also included diagrams of human anatomy and industrial machinery, alongside art reproductions. The eclectic nature of the material Paolozzi presented illustrates clearly that he encouraged a wide-ranging and interdisciplinary approach to the creation of art, which has remained central to both his graphic and sculptural work.

In 1953 various members of the Independent Group initiated an exhibition entitled Parallel of Art and Life, held at the I.C.A. which involved Paolozzi, Hamilton and others. As Thomas Lawson writes, Parallel of Art and Life, "...was intended to show how scientific and artistic information could be integrated into a more complex and accurate whole." [49] This intention can be closely paralleled to that of Patrick Geddes in

his 1910 Cities and Town Planning exhibition at the Royal Academy, which also synthesised a vast amount of visual material in order to explain and parallel the complexity of modern urban life (see Part One, Chapter 2). Whilst concrete links between Geddes and the Independent Group are not secure, (but may lie in connections between Lewis Mumford, Geddes most prominent student, and Theo Crosby, Mumford's junior in the United States) they certainly shared philosophic attitudes towards culture and the city. The participants of Parallel of Art and Life and the later This is Tomorrow exhibition (1956) also made use of new technologies, especially in specialised visuals such as X-ray and microscopic photography, showing their willingness to use science to validate exhibitions ostensibly within the visual arts.

The status of Paolozzi and the contribution of the Independent Group is difficult to ascertain. Thomas Lawson, for example, is ambivalent: "...the I.G. does remain an important carrier of early symptoms of dissatisfaction with modernist purism." [50] Lawson continues that Paolozzi and the Independent Group as a whole "...were certainly aware that the area of what they called 'pop art' - mass-produced culture mostly imported from the U.S. - would reward serious study. But the infuriating part is that they were so very slow to act on that perception." [51] It is true to say that from the mid-1950s to the mid-1960s, Paolozzi's main concerns were focussed on sculpture which were, at least in part, rooted in historical precedents. Paolozzi openly acknowledged this in a 1960 interview with Edouard Roditi, where he stated that, "I have never been able to distinguish Dadaist intolerance and iconoclasm from the vandalism of reactionaries." [52] Furthermore, "I am anxious that my works should have a

permanent quality and not be subject to unnecessary change." [53] Lawson argues that only with the As Is When series of screenprints (1965) do the same concerns of human and machine forms become central: he "...stubbornly kept this material on the margins of his attention..." [54]

An examination of pages in Paolozzi's scrapbooks and his studio layout shows that his method of data gathering has remained largely unchanged since his BUNK lecture. Typical source material, evidenced in one photograph, show photographs of brain-probes, plastic toys, comics, a biography of Einstein and fragments of Paolozzi's own work **[Fig. 94]**. This predominance of scientific material and re-use of imagery certainly goes some way to explain Paolozzi's complex working method. Paolozzi is clearly a fervent recycler of his and others' imagery, which in itself contains an industrial metaphor of repeatability, reproduction and re-use.

Despite the technical and analytical appearance of these scrapbooks, the exact intention behind the choice of these images is elusive. As Middleton has written:

> "Paolozzi yearns for a means of communication that is at once precise and ambiguous: on the one hand admitting of no errors, detailed but immediately comprehensible when its terms are understood - as, for example, the language of a technical manual; on the other hand charged with such overtones and undertones that it is capable of stirring deep chords of mystery and wonder." [55]

As Paolozzi has written: "My own readings or source material is largely that of previous art works, technical magazines and books, a world of intricate problems and a lucid language." [56] For example, a page from

a scrapbook dated 1974 is taken from the National Geographic and shows the drama of heavy industry as a steel ingot is prepared for entering a rolling mill. This shows his sketchbooks and his studio practice in general as an arena for "...unclassifiable ideas and continuing revolts," as the Surrealist poet, Louis Aragon, once described the Bureau of Surrealist Research. [57] The appropriateness of Aragon's description to Paolozzi's method also serves to illustrate his debt to Surrealism.

Drawing inspiration from the written word, as Paolozzi has done, also goes back to the methodological approach of visual artists in the Surrealist movement, particularly Max Ernst. In 1919 Ernst commented that his

> "...excited gaze is provoked by the pages of a printed catalogue. The advertisements illustrate objects relating to anthropological, microscopical, psychological, mineralogical and paleontological research...a hallucinatory succession of contradictory images, double, triple, multiple, superimposed upon each other...These images, in turn, provoke new planes of understanding." [58]

This passage by Ernst points forward precisely to the methods employed by Paolozzi, for example in the series As is When (1965) or Blueprints for a New Museum (1980-1). Other influential texts over Paolozzi's career and often mentioned by him are André Breton's What Is Surrealism? (1924), Amedée Ozenfant's The Foundations of Modern Art (1931), and George Kubler's The Shape of Time (1952). Noticably, with Ozenfant, a link can be identified here with the Purist tradition and also the machine aesthetic of Léger; traditions looked to by McCance and Fergusson earlier in the century.

Ozenfant's book is central to Paolozzi's thinking and was very influential in its use of juxtaposed images from a wide variety of sources. He made this book the central focus of a recent talk to the Contemporary Art Society:

> "It's incredibly all-embracing...in a sense it could almost be a handbook for the year 2000...Also what is quite wonderful about the book is the wonderful kind of optimism. The kind of optimism of Europe at that time, about the late twenties. The optimism and belief in technology and a sense of wonder...[his scrapbooks as] a connection with Ozenfant, with linking together disparate images...The drama between man and machine which of course is endlessly exercised in Ozenfant." [59]

The intention in Paolozzi's 'research', like Renaissance science, is above all to gain an overview of the world. His Study for Utopia (1983) **[Fig. 95]** shows an aeroplane (an image often used by Paolozzi) flying over a cityscape. In this respect, a statement made in 1932 by the Russian Constructivist Tatlin, is relevant: "The conditions of aviation (the mobility of machines and their relationship to their environment) create gradually a greater variation of forms and construction than static technology. [60] Paolozzi, like Tatlin, is interested in observing variety and transformation within the modern world rather than static technology. The urge to observe a city and interpret its everchanging complexity is an intention of Paolozzi which coincides closely with that of Patrick Geddes, evidenced in his writings, for example, "Civics: As Concrete and Applied Sociology" (discussed in the Conclusion of Part One) and in relation to his establishment of the Camera Obscura on the Royal Mile in Edinburgh. Paolozzi shares with Geddes and Tatlin a humanistic urge, hence the predominance of the human figure in many of Paolozzi's prints. The human figure juxtaposed with mechanical subjects has been implicit in the

earliest of Paolozzi's graphic works such as his series of collages from 1946 onwards, such as Sadistic Confession (1946-7) **[Fig. 96]**, and into later lithographs such as Standing Figure (1956) **[Fig. 97]**, the latter of which is a mixture of technological and mechanical details enclosed within a human outline. In As Is When (1965) **[Fig. 98]** depictions of the body emphasise it as a functional machine and as such is put in the context of other 'functional machines' such as military equipment and International Style architecture.

Collage and the Provisional Act

Collage involves the act of cutting, of appropriating imagery from elsewhere, in part maintaining some of its original identity whilst also imparting new meaning on the imagery.' For Paolozzi, "The word collage is inadequate as a description because the concept should include 'damage, erase, destroy, deface and transform all parts of a metaphor for the creative act itself." [61] On a formal level, the breaking up of pictorial elements shows a debt to Léger's early abstract paintings. In an essay of 1954, Clement Greenberg, noting this aspect of Léger (albeit on a purely pictorial level) gives an indication of how Paolozzi may have employed Léger's aesthetic to develop his own collage. Greenberg writes:

> "...he [Léger] did accept, as Picasso and Braque did not, the full implication of the method of analytical Cubism: namely, that once objects are broken up into more or less interchangeable units they themselves are no longer necessary as entities - no longer necessary to the decisive effect - and the artist is free to work with the units alone, since these alone retain aesthetic pertinence." [62]

The freedom with which Paolozzi manipulates and interchanges pictorial elements are hardly determined only on a formal level, but share the approach of Léger, as described by Greenberg, in encouraging the artwork to be composed on disparate components which previously could not have been disunited. In looking at Léger, Paolozzi reaffirms his allegiance to an artist dedicated to finding visual expressions for the machine world. The essentially collage-based approach Paolozzi then developed enabled him to produce an "...iconographic interpretation divorced from the niceties of formal analysis...Dream and poetry can be fused together without the usual concessions to graphic niceties." [63] Paolozzi's use of collage helps him to avoid too much attention to pictorial structure and unity.

The nearest parallel to the complex industrial processes Paolozzi uses in his sculpture, is in the repeated and deliberately artificial methods he employs in the act of printmaking. In 1983 he described the processes brought to bear on the imagery used in the series Calcium Light Night (1974-6):

> "I have...done tracings of it, enlarged it, coloured it twisted it...With Chris Betambeau, who did the printing, I was able to use a variety of printing techniques on each print including adding colours photographically, hand painting some photographic areas on the screens, mechanical tints, under and over exposing photographically, hand stippling, embossing..." [64]

Clearly Paolozzi is absorbed in the endless variety of alternatives made available to him when he employs the skills of a specialist printmaker, who can help him push graphic techniques as far as they can go. The complexity engendered itself acts as a metaphor for the

complexity of industry and the modern world. Furthermore, this way of working has been identified by writers on Paolozzi as paralleling twentieth-century challenges to the perceived materialist unity of science. As Middleton has said: "...causality and determinism are now seen to be chimerical and we know ourselves to be ruled by probability theory and chance. There is a loss of belief in the finite statement." [65] The finite statement is avoided or relegated behind the process or the initial impulse: "...although the original concept of a sculpture may seem important to me, the actual final object may not be of much consequence." [66]

Cloud Atomic Laboratory (Science and Fantasy in the Technological World)

The darker side of industry and contemporary society in general is the subject of Cloud Atomic Laboratory (1971), a series of photogravures. It comprises eight pairs of airbrushed photographs including industrial subjects such as "Skull of Test Dummy and U.S.S.R. Proton-Synchron Electrophysical Laboratory" [Fig. 99]. In the introductory text of Cloud Atomic Laboratory, Paolozzi has written that, "Within the grand system of paradoxes the same theme of this portfolio is the Human Predicament. Content enlarged by precision. History shaded into the grey scale as in the television tube." [67] Paolozzi portrays a negative, airless environment which questions the basis of industrialised society in visual form, depicting the type of environment Carlyle warned against in "Sign of the Times". In the manner of many of Paolozzi's prints, advanced, commercial-quality techniques deliberately neutralise expressive, individual handling. The artist has deliberately created a kind of artistic vacuum, devoid of emotion. The image requires that the viewer's own emotion fills the

vacuum. Paolozzi's humanistic approach centres on the precept that, in such a work, when we look at humanity dehumanised, replaced or absent, this helps the viewer to clarify the human element and thus to separate it from the non-human.

Conditional Probability Machine

The famous dissections of Leonardo seems likely to be one of the most important inspirations for many images employed in Paolozzi's Conditional Probability Machine series (1970) **[Fig. 100]**. However whereas Leonardo was using drawing itself as a tool towards understanding, which is the more characteristic approach to research, Paolozzi uses the researches done by others in the form of reproductions taken from publications. It is obvious that Paolozzi himself is not discovering the secrets of the reproductive system in, for example, the double image of male and female reproductive organs (an image which closely resembles a page from one of Leonardo's scientific drawings depicting intricate tendons and muscles of the human arm.) The imagery for Conditional Probability Machine was taken from a book called The Secret of Life. The Human Machine and How It Works by Peter Watson. [68] Paolozzi, in using this source material, is not supporting the thesis which approximates humankind to a machine; rather he responds with irony and humour, to the idea that the subject of sex is so objectively analysised in this type of text book. Sex depicted by diagrammatic presentations in technical publications, represents the opposite pole to this subject in the hands of the Surrealists, such as Salvador Dali, or Pop artists, such as James Rosenquist. In Conditional Probability Machine the artist makes a comment on the detached nature of

medical diagrams as they dispassionately illustrate the sexual and reproductive cycle. [69]

Test dummies in simulated car accidents have also been used as imagery by the artist. The etching Man One, Pig One (1984) **[Fig. 101]** depicts the dummy contained within a simulated car about to be 'crashed' under controlled experimental conditions. To make the interplay between living beings and stand-in human beings, the artist has put that image adjacent to a strapped-in pig, similarly about to be used for experimentation in laboratory-controlled car crashes. Beneath the dispassionate way the image has been executed there is an underlying concern with humanity's condition when subjected to some of the extremes of technological progress. Paolozzi seeks to explore the graded differentiations that can be made between the inanimate machine, the animal as a subject for experimentation, and human beings themselves.

Mein Kölner Dom - Blueprints for a New Museum (1980-1) **[Fig. 102]** draws on the themes of obsolescence, cultural icons and our emerging museum culture. It relates to industry in that it conflates the art museum with the science museum and the way they display alternative forms of human progress.

Blueprints for a New Museum uses Cologne Cathedral as the repositry for past and present ideologies: "I created a kind of blueprint for my ideal museum - the museum has one example of everything that is wonderful

and has meaning - an aeroplane, railway engine, a large model of a pig, Einstein, computers, the Beaubourg." [70] He selects an image of the B-52 United States bomber as potent metaphors of technological obsolescence.

Comparing the nineteenth and twentieth centuries, Paolozzi says: "...the mental landscape is entirely different, so infinitely complex that an almost archaeological exactitude has to be taken in deciding on which of the million available images you are going to represent, for what reason and in what style..." [71] André Malraux's classic Museum Without Walls (1949) is relevant to Paolozzi's approach in Blueprints, especially as only a few years earlier Paolozzi had described the book as "...the best way to tackle the communications problem." [72] In Malraux's 'design' the museum consists only of reproductions in a book whose collation within the viewer's mind represents the museum without walls. All past works of art are transcribed through photography, homogeneity is imposed through reproduction, "thanks to the rather specious unity imposed by photographic reproduction on a multiplicity of objects..." [73]

When Paolozzi's imagery concentrates on America, a more post-industrial version of modernism makes itself apparent. The tensions and paradoxes in modernism have been discussed by the American Marshall Berman:

> "Modern environments and experiences cut across all boundaries of geography and ethnicity, of class and nationality, of religion and ideology: in this sense, modernity can be said to unite all mankind. but it is a paradoxical unity, a unity of disunity: it pours us all into a maelstrom of perpetual disintegration and renewal, of struggle and contradiction, of ambiguity and anguish." [74]

For Paolozzi the Laocoon can be read of man struggling against machine, and he had already used it directly as a source in Poem for the Trio MRT (1964) [Fig. 90]. The precise reasons why this and other references are included, as well as their compositional arrangement, are not set and can go through transitions, as Lawrence Alloway understood as evidenced in the following: "Paolozzi's objects have no set meanings. Therefore he can create a world in which contrasting images reveal not their estrangement but, on the contrary, the inexhaustible meanings that follow from changing combinations. Meaning is descriptive." [75]

Conclusion

In conclusion, it can be argued that the art of Paolozzi might be termed that of a post-industrial realist. His use of industrial subject matter and processes are central to his art, and build strongly upon realism in that recognisable representation is employed rather than any abstracting tendency. Yet this close connection with the visible manifestations of industry which inspire Paolozzi, as they inspired Evelyn Carey, Muirhead Bone and Ian Fleming, for example, is rooted in a different ideological world for Paolozzi in that heavy industry is now less dominant a feature of British society and is used more often in a symbolic way. Paolozzi inherits a post-industrial world-view, albeit one also based in first-hand experiences of industry itself. The machine aesthetic and the promotion of functionalism is an ideology located in early Modernist theory and therefore not one available in a unmediated form to Paolozzi, yet its centrality in our culture makes the machine aesthetic one of Paolozzi's key sources of inspiration. As Middleton has written: "...machine forms are a subject neither for awe nor disdain...Paolozzi finds his [images] in a technology that will doubtless seem as crude [as Donne and Vaughan's use of contemporary science] as later generations." [76] He demonstrates, therefore, a fascination with machines but does not share the early Modernists' faith in them.

Given Paolozzi's awareness of historical progress within the Western world, references to past ideologies of modernity do often appear. For example, there are broad links between Paolozzi's use of imagination within

industrialised society and the ideas of Baudelaire, one of the first writers to promote visual art's confrontation with the urban world, already discussed in the context of Muirhead Bone (see Part Two, Chapter 2). Echoes of Baudelaire's 'Painter of Modern Life', with its quasi-romantic view of the modern world is found in the following passage by Paolozzi on the nature of art as a "...metamorphosis of quite ordinary things into something wonderful and extraordinary that is neither nonsensical nor morally edifying...the sublime of everyday life." [77] He could be said to play the superceded ideology of nineteenth-century Romanticism off the equally superceded ideology of Functionalism. As Lawrence Alloway has recently said, although not in connection with Paolozzi: "Art needs a change of scale, away from the scarcity of "true" art to the facts of abundance." [78]

Paolozzi's interest in industry and science in general is not academic. Richard Hamilton offered the opinion that - "You are concerned with mathematical ideas at the purely visual level - your education doesn't permit you even to know very much about the mathematical structures of these ideas..." [79] Paolozzi replied by the observation that:

> "It is debatable whether one can have a totally emotional attitude toward science in the same way one can have a totally emotional atitude toward nature in general. Tied in with the visual interest is the desire to try and find some kind of clues outside of the orthodox art channels...some kind of means of constructing something without necessarily resorting to programmatic art - to try and use geometry toward an original art, a personal angle." [80]

This approach might be located along with Paolozzi's post-industrial orientation in that the Modernist need to understand, control and direct the processes of industrialisation is not held by Paolozzi. Instead the realms of industry and science become one of many available symbolic volcabularies, and as such do not require academic understanding. He made this fact explicit in an essay in Uppercase of 1958, concerning "...the microscopic world [that] lives in the mouth...Does then the artist concern himself with microscopy?...Only for the purposes of comparison, only in the exercise of mobility of mind. And not to provide a scientific check on the truth of nature." [81]

In the discussion in Part Two, Chapter 5 on Ian Fleming, the first indications of a post-industrial interpretation in art were identified. In analysing Paolozzi's art, it is clear he deals simultaneously with both heavy industrial subjects and the cleaner, post-industrial processes of recent technological advances. As Herbert Read identified, this has been an ongoing process: "...his new images, functionless machine-tools or sterile computers, derive not, like his previous work, from the debris of industrialism, but from the rational order of technology." [82] Yet there seems to be no arbitrary division between heavy industry and high technology in Paolozzi's use of such material. Middleton still saw the presence of heavy industry rather than high technology in the latest work of the artist, described above by Read. To him it suggested, "...the chunky strength of the first industrial revolution. Their machined and bolted components seem nearer in spirit to the great bridge builders of the

nineteenth century than to the printed circuitry and transistors of today." [83]

Contemporary society's Utopian urge to use industry and technology in order to create a perfect world is the object of much discussion in the social sciences, some of which is relevant in the context of Paolozzi's complex attitude towards modernity. One such example is the following passage by feminist writer, Melanie Klein, which seems pertinent to themes explored by Paolozzi:

> "In our epoch, the fundamental ambivalence of science and technology is neurotically repressed in favour of an infantile cleavage between good and bad objects. This can take the form of splitting off 'bad' (i.e. aggressive, persecutory) technologies, such as nuclear weaponry, from 'good' (i.e. nourishing, sustaining) technologies such as, say, domestic information and communications technologies. It can split older 'bad' technologies of industrialisation (dirty, polluting) from new and 'good' post-industrial technologies (clean, efficient)...Our relationship to any single artifact can oscillate between pleasure and hostility. At one level, this splitting mechanism offers the possibility of handling negative aspects of technology without allowing them to ruin the pleasures that we expect it to provide. Moreover, it can mean utterly disavowing the negative aspects, while idealising the positive ones. This neurotic process lies at the heart of our relation to technology." [84]

It is not proposed here that Paolozzi follows the above analysis, merely that he is responding to the very powerful, deeply embedded psychological hold industry and technology has on the human mind, explored by Klein here. Its depth of psychological presence naturally makes it interesting for an artist such as Paolozzi, who is very much endebted to Surrealism. He refuses, often, to take an explicit moral position due to

his appreciation of the fantasy and bizarre symbolism which industry offers coupled with an awareness of its dangers, thus continuing the tradition established by Thomas Carlyle. His fears concerning the negative effects of modernity were recently expressed by Paolozzi in the following statement: "Does any government work?...I read internationally...of global destruction at an accelerated pace, disappearing natural resources, billion-pound military equipment accidently destroyed, the supremacy of the computer over the individual." [85] In 1979, in the essay "Junk and the New Arts and Crafts Movement", Paolozzi invoked Wyndham Lewis as one of the writers to anticipate negative aspects of industrialised society: "...a society with interchangeble values, incomprehensible ideas and a destructiveness only anticipated by writers like Conrad, Ballard and Wyndham Lewis." [86] Thus, it is clear that the writings of Lewis which connect with other artists and writers in this thesis, similarly find a sympathetic response in Paolozzi's writings too.

Paolozzi seems to resist taking a dogmatic position towards industry: "I feel that man's position in general is his feeling and his attitude towards the machine. You can retreat from it or you can wrestle with it...I think it hangs like a great big shadow over all our lives." [87] It is doubtful if Paolozzi ever fully shared the positivism of some of his Independent Group associates in the 1950s but it is only fairly recently, identifying with the ecological movement of the last few decades and the nuclear disaster at Chernobyl, that Paolozzi seems more disposed to emphasise environmental issues within his work. His concerns are predominantly in connection with over-development in the city, industrial pollution and the arms race, evident particularly since the early 1970s

with scultpures such as Waste and Bombs (both 1971). "I think that the race towards destruction is colossal...Post-Chernobyl they've slaughtered 100,000 reindeer, all radioactive and buried in a deep pit. They can't even use the land now." [88] In some of his writings he has struck a tone entirely consistent with the sentiments of Carlyle in his anti-industrial mode: "Modernism is the acceptance of the concrete landscape and the destruction of the human soul." [89] The image Paolozzi creates, therefore, ultimately contrasts two powerful extremes in modern life: the preservation and health of the natural and humane in the face of the industrial. In its widest sense, the complex interface between industry and humanity, which is central to Paolozzi, shares and builds upon the contribution of many of the writers and artists discussed above.

NOTES

Part Two, Chapter 7. The Sculpture and Graphic Work of Eduardo Paolozzi

1. "Talks with Great Scots, No.4. Muirhead Bone" Scotland, Spring 1937, p.37

2. Frank Whitford, Eduardo Paolozzi London: Tate Gallery, 1971, p.6-9

3. Ibid., p.7

4. Frank Whitford, "Inside the Outsider", Eduardo Paolozzi. Sculptures, Drawings, Collages and Graphics, London: Arts Council of Great Britain, 1976, p.8

5. Thomas Lawson, "Bunk: Eduardo Paolozzi and the Legacy of the Independent Group", Modern Dreams: The Rise and Fall and Rise of Pop, Brian Wallis, Tom Finckelpearl, Patricia Phillips, Glenn Weiss and Thomas Lawson (eds.) Cambridge, Massachusetts and London: M.I.T. Press, 1988, p.19

6. Andrew Patrizio and Bill Hare, interview with the artist, "The Apotheosis of Pessimism", Nullius in Verba, Edinburgh: Talbot Rice Gallery, 1989, p.42. An extensive interview with the artist was conducted on 16 December, 1988, subsequently published in an edited and reduced form as "The Apotheosis of Pessimism."

7. "Eduardo Paolozzi: Breakthrough", Scotland on Sunday, 3 March, 1989, p.26

8. Cited in Uwe M. Schneede, Eduardo Paolozzi, London: Thames and Hudson, 1971, p.6

9. Lecture "The Nature of the Obsession", Edinburgh College of Art, 19 November, 1987

10. Modern Scottish Painting, 1943, op. cit., p.58-9

11. Paolozzi's area of concern here was also developed by other British sculptors, exemplified by Lynn Chadwick's Trigon (1961) and Reg Butler's Tower (1962).

12. Eduardo Paolozzi, "Collage or a Scenario for a Comedy of Critical Hallucination", Eduardo Paolozzi. Collages and Drawings, London: Lund Humphries, 1977, n.p.

13. Michael Middleton, Eduardo Paolozzi, Art in Progress Series (Jasia Reichardt, ed.), London: Methuen, 1963, n.p.

14. Robin Spencer, et al, Eduardo Paolozzi. Recurring Themes, London: Trefoil, 1984, p.96

15. Mary Shelley, Frankenstein, (1816), (London: Scholastic Book Services, 1974, ed.), p.54. For a discussion of other associations generated by the Frankenstein myth, see also Langdon Winner, "Frankenstein's Problem",

Autonomous Technology. Technics-out-of-Control as a Theme in Political Thought, Cambridge, MA: M.I.T. Press, 1977, pp.306-335.

16. M. Middleton, op. cit., n.p.

17. "Signs of the Times", (1829), op. cit., passim., pp.77, 73, 65, 67

18. R. Kipling, MacAndrew's Hymn, 1894

19. "Notes from a Lecture at the Institute of Contemporary Arts, 1958" Uppercase, (Theo Crosby, ed.), London, 1958, p.120

20. "Signs of the Times", op. cit., p.84

21. John Ruskin, "The Nature of Gothic", The Stones of Venice, Vol.II, chap.vi, (1853) in Eric Warner and Graham Hough Strangeness and Beauty. An Anthology of Aesthetic Criticism 1840-1910. Vol.1 Ruskin to Swinburne, Cambridge: Cambridge University Press, 1983, p.57

22. Ibid., p.54

23. "Sculpture and the Twentieth-Century Condition", Art and Design, Dec. 1987, p.80

24. M. Middleton, op. cit., n.p.

25. The implications of such a dialogue were interpreted by Paolozzi in his exhibition, Lost Magic Kingdoms and Six Paper Moons from Nahuatl, London: Museum of Mankind / British Museum, 1985.

26. In Walter Michael and C.J. Fox, Wyndham Lewis on Art. Collected Writings 1913-1956, London: Thames and Hudson, 1969, p.45

27. Blast I, ibid., p.28

28. In contemporary publications on this subject, these relevant issues were raised, for example, W. Sluckin, Minds and Machines, Harmondsworth: Penguin, 1954, p.9

29. L. Alloway, Eduardo Paolozzi. The Metallization of a Dream, London: Lion and Unicorn Press, 1963, p.38

30. E. Paolozzi, "Artist's Statement", in M. Middleton, op. cit., n.p.

31. C. Finch, Image as Language. Aspects of British Art 1950-68, Harmondsworth: Penguin, 1969, p.40

32. The polished finish to Paolozzi's sculpture at this time cannot only be seen as relating to industrial processes, but is also due to the influence of New Generation sculptors, such as Philip King, and Minimalist sculptors, such as Donald Judd. The influence of both these movements produced a simplifying, highly finished and sometimes humorous direction in his sculpture. The influence of Minimalism did emphasise a more mechanical, abstract aesthetic, which shared a source in the 1920s mechanised

aesthetic of Léger and Purism, evidenced in Paolozzi's Gexhi (1967) and Pikabio (1975), the latter's title directly refers to Picabia, an important Surrealist exponent of the machine aesthetic.

33. R. Hamilton, "Interview with Eduardo Paolozzi" (1965), reprinted in Eduardo Paolozzi. Sculpture, Drawings, Collages and Graphics, London: Arts Council of Great Britain, 1976, p.36

34. Ibid., p.38

35. H. Read, A Concise History of Modern Sculpture, London: Thames and Hudson, 1964, p.234

36. Statement by the artist in E.P. Sculptor, (Murray Grigor, dir.), Channel Four, 1988.

37. A. Patrizio and B. Hare, "The Apotheosis of Pessimism", op. cit., p.42-3

38. "Notes by the Sculptor", Eduardo Paolozzi. The Metallization of a Dream, op. cit., p.5

39. "Speculative Illustrations. Eduardo Paolozzi in conversation with J.G. Ballard and Frank Whitford", Studio International, October, 1971, p.142

40. "Interview with Jim Waugh", The Development of the Idea, St. Andrews: University of St. Andrews, 1979, n.p.

41. The genesis of this interest may have been supported by an exbihition in London in 1957 entitled "The Wonder and Horror of the Human Head", cited in Diane Kirkpatrick, Eduardo Paolozzi, London: Studio Vista, 1970, p.27

42. A. Patrizio and B. Hare, "Apotheosis of Pessimism", op. cit., p.45

43. R. Hamilton, "Interview with Eduardo Paolozzi", op.cit., p.37

44. Ray and Gwen Shaw "The Cultural and Social Setting", The Cambridge Guide to the Arts in Britain. No9. Since the Second World War, (Basil Ford, ed.), Cambridge: Cambridge University Press, 1988, p.3

45. Cited in Robert Hewison, In Anger. Culture and the Cold War 1945-60, London: Methuen, (1981), revised 1988, p.16

46. "Conversations between Eduardo Paolozzi and Alvin Boyarsky. May 1984", in Eduardo Paolozzi. Underground Design, London: Architectural Assocation, 1986, p.7

47. Ibid., p.6-7

48. Excerpt from interview with Richard Hamilton by Bill Hare and Andrew Patrizio, 18 March, 1988.

49. T. Lawson, "Bunk. Eduardo Paolozzi and the Legacy of the Independent Group", op.cit., p.24

50. Ibid., p.27

51. Ibid., p.22

52. E. Roditi, "Eduardo Paolozzi", Dialogues on Art, London: Secker and Warburg, 1960, p.157

53. Ibid., p.159.

54. T. Lawson, "Bunk. Eduardo Paolozzi and the Legacy of the Independent Group", op.cit., p.24

55. M. Middleton, Eduardo Paolozzi, op. cit., n.p.

56. Ibid., n.p.

57. L. Aragon, *Une Vague de Rêves*, (privately printed, Paris, 1924) cited in Concepts of Modern Art, (Nikos Stangos, ed.), London: Thames and Hudson, 1978, p.123.

58. Cited in M. Middleton, op.cit., n.p.

59. Eduardo Paolozzi: Contemporary Art Society Annual Lecture, Tate Gallery, London, 29 November, 1988 (Transcript by A. Patrizio).

60. "Art Out Into Technology" cited in The Tradition of Constructivism, (Stephen Bann, ed.), Thames and Hudson, 1974, p.173.

61. "Collage or a Scenario for a Comedy of Critical Hallucination" (1977), in Eduardo Paolozzi. Underground Design, 1986, n.p.

62. Partisan Review, Vol.XXI, Jan.-Feb. 1954, cited in Francis Frascina and Charles Harrison, Modern Art and Modernism. A Critical Anthology, (Open University, 1982), reprinted London: Paul Chapman, 1988, p.112

63. "Collage or a Scenario for a Comedy of Critical Hallucination", op. cit., n.p.

64. E. Paolozzi, "Where Reality Lies", Oxford Art Journal, Oxford Microfilm Publications, Vol.6, No.1, 1983, p.43

65. M. Middleton, op.cit., n.p.

66. "Sculpture and the 20th-Century Condition", Art and Design, December, 1987, p.77

67. "Introduction", Cloud Atomic Laboratory, 1971, n.p.

68. A copy was given to Paolozzi in 1948, cited in R. Spencer, Eduardo Paolozzi. The Conditional Probability Machine, Midland Arts Centre, 1973, catalogue entry no.3.

69. In this, Paolozzi is indebted to an important precedent in Marcel Duchamp's The Bride Stripped Bare by her Bachelors, Even, which interprets

complex sexual themes, eventhough in their mode of presentation, both The Bride Stripped Bare by her Bachelors, Even and Conditional Probability Machine seem highly scientific, diagrammatic and intellectual.

70. E. Paolozzi, "Where Reality Lies", op. cit., p.42

71. "The Iconography of the Present", Eduardo Paolozzi. Sculpture, Drawings, Collages and Graphics, op. cit., p.29

72. Ibid., p.28

73. A. Malraux, "Museum Without Walls", reprinted in The Voices of Silence, (Stuart Gilbert, trans.), New Jersey: Princeton University Press, 1978, p.46

74. Marshall Berman, All That's Solid Melts Into Air. The Experience of Modernity, (1982), reprinted London: Verso, 1983, p.15

75. L. Alloway, Metallization of a Dream, op. cit., p.50

76. M. Middleton, op. cit., n.p.

77. E. Roditi, "Eduardo Paolozzi", op. cit., p.155

78. L. Alloway, Network. Art and the Complex Present, Ann Arbor, MI: UMI Research Press, 1984, p.28

79. R. Hamilton, "Interview with Eduardo Paolozzi", op. cit., p.37

80. Ibid., p.37

81. Cited in Metallization of a Dream, op. cit., p.52

82. H. Read, A Concise History of Modern Sculpture, op. cit., p.235

83. M. Middleton, op. cit., n.p.

84. M. Klein, Envy and Gratitude and Other Works 1946-1963, (1975), cited in Kevin Robins and Frank Webster, "Athens without Slaves...or Slaves without Athens? The Neurosis of Technology", Science as Culture, No.3, London: Free Association, 1988, p.46

85. The Observer, 7 June, 1987

86. In Eduardo Paolozzi. Collages Prints Sculptures, op. cit., n.p.

87. The Development of the Idea, op. cit., n.p.

88. A. Patrizio and B. Hare, "The Apotheosis of Pessimism", op. cit., p.44

89. In Eduardo Paolozzi. Collages Prints Sculptures, op. cit., n.p.

CONCLUSION

This thesis has been concerned with the theme of industrialisation as it has made itself apparent in art theory and practice in Scotland. It is clear that this theme has implications which span substantial quantities of cultural and historic material. This conclusion seeks firstly to summarise the most important aspects of the analysis carried out above, secondly to identify related areas which have not been fully discussed, and thirdly to indicate potential areas for future research.

In one sense the arguments above can be viewed in the context of an attempt to evaluate and synthesise two dominant cultural phenomena: 'Modernism' and 'Modernisation'. This has required an awareness of their broadest senses, pertinent to Western society in general, as well as their translation into Scottish society in particular.

Modernism

The development of Modernism as an artistic and cultural phenomenon is a major factor which underlies this thesis. Artists under discussion here, such as William McCance, J.D. Fergusson and Eduardo Paolozzi, can be seen to be highly aware of artistic developments outside Scotland. This has had radical implications for the way they treated their subjects. Yet the central question is the extent to which a form of Modernism particular to Scotland can be claimed for those artists included here and how they made sense of the dichotomy between Modernism as it was understood by the arts

and Modernisation within an industrial context. In one sense, as the analysis in Part Two has demonstrated, the responses have been personal and particular to each artist's case. This is only to be expected given the individual achievements of the artists. Supporting this sense of difference is also the fact that there has never been merely one generally accepted view of what Modernism means to twentieth-century artists; the debate remains a contemporary one in art history and criticism. There is a strong tradition within the Modern Movement which has sought to assert humanity's place within an industrialised world, hence an abiding interest in the man/machine dialogue evidenced in artists such as Duchamp, Léger, Delauney, Tatlin and Rauschenberg, to name only a few disparate participants. Within their different contexts, the Scottish artists discussed here are linked by a broadly humanistic urge to locate personal experience within contemporary society. This tradition of Modernism may be seen to be significantly more enduring than a contrasting strain of Modernism which has concentrated purely on formal invention. However, allowing for personal difference, there do exist remarkable parallels and links among many of the artists and theorists discussed here, such as the strength of commitment to a synthesising philosophy based on the Arts and Crafts Movement at the end of the nineteenth century, which drew in Patrick Geddes and reverberated through to Hugh MacDiarmid, Ian Finlay, J.D. Fergusson and Eduardo Paolozzi. The interest in Functionalism shared between Evelyn Carey and Muirhead Bone was a related ideology which lost no power in being later a point of contact in the philosophy of William Johnstone and Eduardo Paolozzi. The presence, too, of artists such as Léger and Wyndham Lewis provided key examples for a number of the artists discussed here, particularly McCance, Fergusson and Paolozzi. It could even

be proposed that Léger's commitment to the link between art and politics was developed by the printmakers and painters in Glasgow discussed in Part Two, Chapter 6, a link which has been denied by other strains of Modernism.

One strong characteristic of much Modern Scottish art which has treated industrial themes is its unsentimental focus and sense of purpose. It can be argued strongly that Scottish artists have largely rejected the Romantic interpretation of industry, one which emphasised the dramatic, elemental power of the subject. Whilst this orientation is not absent from some of the artists under discussion here such as Evelyn Carey and Muirhead Bone, it is more accurate to say that Scottish artists have remained determined to see the industrial environment in as direct, unmediated fashion as possible, utilising important avant garde artistic means of expression where appropriate. In itself this can be seen as a truly consistent approach to the treatment of industrial subjects in Scotland throughout the century under discussion.

It can be argued that this unmediated approach finds its foundation in the substantial art of topography, to which we must look further. Up to the Industrial Revolution, much art depicting industrial subjects had possessed a strongly topographical character, its intention being specifically to record the processes, products and events of the Industrial Revolution. Scottish examples include John Knox's First Steamboat on the Clyde (c.1820) and D.O. Hill's Opening of the Glasgow Garnkirk Railway (1832). A study of this period in Scotland, in effect covering the same period as F.D. Klingender's classic Art and the Industrial Revolution

(1947), would serve as a vital contribution to the study of art and industry, chronologically lying as it does before the start of this thesis.

Much of Klingender's book concentrates on the art of visual documentation. This is most closely paralleled in this study in the chapter on Evelyn Carey. Reportage, including the topographical tradition, clearly had a more substantial remit in celebrating industry, a function more suited to earlier, nineteenth-century art. Previous to Scotland's economic decline, when confidence was at its peak, industry itself can be considered as having a self-sustaining momentum in cultural terms, apparently needing little justification for its dominance. The parallel ideologies of the actual industrialisation process and its imagery were closely linked. This is especially true of Evelyn Carey's photographs of the Forth Rail Bridge and still apparent in Muirhead Bone's graphic work prior to the First World War. The positivism exhibited in the images of that time correlates to the positivism of industrialisation in general. The desire to record, rather than explicitly to comment on the effects of modernisation overflows into the work particularly of both Evelyn Carey and Muirhead Bone.

Whilst Modernism has overseen the relegation of topography to a secondary art form, its influence in the art of the later period discussed in this thesis has not been a negative factor and has been transformed in the process. A certain attempt to maintain a dispassionate sense of enquiry in the treatment of industrial subjects, rooted in its topographical beginnings, has kept art of this type in Scotland rigorous and analytical. Due to both the artists' sensitivity to their time, the

work of the last century has achieved a high degree of serious intent. Its relationship to previous topographical work should not be seen as indicating a laxity of perception and imagination.

When issues of Modernism and Modernist styles come to the fore, the artist necessarily is linked less firmly to a nineteenth-century topographical tradition. This has been discussed in the above analysis of Fergusson, Paolozzi, and Cursiter's paintings of 1913 (Appendix II), each of whom's work was founded on mainstream Modernist styles, including Fauvism, Surrealism, Constructivism and Futurism.

The subsequent decline in heavy industry had a marked and highly visible effect on the condition of Scotland and as such inevitably affected the approach of Scottish artists. Industrialisation, from the 1930s onwards could no longer be looked on in the same way. The still incomplete transition from an industrial to a post-industrial society has radically altered the perspective of society on the previous industrial environment. The work of Paolozzi, especially in his use of irony and pessimism, relies in part on a perspective which looks critically on heavy industry and some of its social aspects. This cultural perspective differs from the nineteenth-century positive image of industry and its attendant material benefits. Nineteenth-century industrialisation necessarily carries within it many contradictions, in that it was a source for an unprecedented amount of wealth creation whilst at the same time being the chief cause of severe deprivation for a great many people, all of whom, ironically, were dependent on it for subsistence. The drift away from this form of

production has in recent years meant a new perspective is available for artists and this new approach is typified by the work of Paolozzi. This area of transition between two dominant images of Modernisation still requires further work, requiring to look closely at contemporary theories of post-industrialisation and also at younger generations of Scottish artists, which lie beyond the scope of this thesis.

Modernisation

In turning to the second factor, Modernisation, enquiry is complicated by the fact that the term is considerably broader in meaning and influence than the profound social, economic and cultural changes which occured in Scotland. Its influence in the developed countries is relatively uniform; among its chief effects were improved processing of raw materials, greater quantity and quality of industrial products, and higher degrees of specialisation and division of labour in all countries touched by it. These characteristics were by no means peculiar to Scotland, therefore any artistic response to Modernisation in Scotland could still owe characteristics to more general and uniform phenomena in Western society. So whilst artists such as Muirhead Bone and Ian Fleming may have been responding to the powerful industrial environment in Scotland, the argument cannot always be made that it was a peculiarly Scottish form of industrialisation to which they reacted.

Even the very presence of industrialisation should not be isolated from its wider context, particularly with regard to the image of the Scottish landscape. It can certainly be claimed that Scotland's central

belt was one of the earliest and most drastically affected industrialised areas in Europe. In contrast, the North of Scotland and the Borders remained rural and largely undisturbed by industrialisation, and represented a direct negative in cultural terms to the modernisation of Central Scotland. Few artists have made this contrast the specific focus of their work but it underlies the way in which we should view depictions of the industrial landscape in Scotland, and is an area which would reward further study.

Definitions of 'Nation'

In the Scottish context the search for an adequate definition for the term 'Nation' has been long and fraught with difficulties. Previous chapters have already raised this issue in regard to members of the Scottish Renaisance such as MacDiarmid, Finlay and McCance. From this flows the problematic notion of national schools and characteristics and their relevance to Scottish artists. Nationhood in Scotland over the century under discussion here has changed radically, both from an internal perspective and in terms of a negative nationality, focussed on the contrasting material wealth of England.

Both England and Scotland experienced a gradual encroachment of industry which naturally affected its broader cultural response to industrialisation. As Kumar writes: "...the British case...was unique in its gradualness, in its unplanned nature, in its nativeness, and in its privateness. Elsewhere, to a remarkable degree, industrialization came as an import, imposed on the society from on top, or brought in by a group

alien or marginal to the prevailing social structure." [1] Scottish entrepreneurs participated willingly in the industrial process and became prosperous with it. The ability, however, for the wider population not discussed here to absorb on a cultural level what was happening on an industrial one remains more difficult to argue. The persistence of ruralism and landscape subjects in Scottish art and literature throughout the nineteenth and twentieth centuries has meant that the criticism levelled by D.H. Lawrence at specifically the English psyche regarding the modern world might well be applied to a significant percentage of Scottish literary and visual art:

> "The English character has failed to develop the real *urban* side of a man, the civic side...The Englishman still likes to think of himself as a 'cottager' - 'my home, my garden'...The English are town birds through and through, today, as an inevitable result of their complete industrialization. Yet they don't know how to build a city, how to think of one, or how to live in one. They are all suburban, pseudo-cottagy, and not one of them knows how to be truly urban." [2]

It is a notable achievement for the particular Scottish artists of this century analysed here, that much important writing and visual art has sought to re-address this lack of assimilation of industrialisation.

It has not been argued that all the artists discussed above are necessarily to be linked by a secure lineage. It would be a misrepresentation of the artists to put them within a 'school' who collectively and solely tackled industrial subjects. The attempt to secure strong connections in all cases is inevitably hampered by the fact that some artists, such as Evelyn Carey and William McCance remained and still remain relatively obscure and would not have been particularly well-known

to their successors. Furthermore, no artists have deliberately proclaimed for themselves exclusivity in tackling industrial subjects, with a conscious expression of ideas on art and industry which could have been identified by succeeding artists. Yet the artists are discussed collectively here because they all faced similar problems in trying to tackle the question of how the visual arts might treat industrial subjects, and how an artist might find an appropriate language to accommodate industrialisation, which is unarguably among the most pervasive and important influences of our time. What has been demonstrated is that many of the artists and writers can be located around vital theoretical positions, such as Arts and Crafts philosophies, Functionalism, and the attempt to work imaginatively between the seemingly conflicting social and cultural notions of Modernisation and Modernism. Ultimately, however, these connections between individuals and movements form only one aspect of this thesis. Each brought with them provocative and highly serious insights into the industrialised environment they inhabited.

NOTES
Conclusion

1. K. Kumar, Prophecy and Progress. The Sociology of Industrial and Post-Industrial Society, Harmondsworth: Penguin, 1978, p.126

2. D.H. Lawrence, "Nottingham and the Mining Country", (1929), Selected Essays, Harmondsworth: Penguin, 1950, p.121

APPENDIX I

Muirhead Bone's Appointment as Official War Artist

By 1915, as realisation of the unprecedented magnitude of the War was beginning to make itself evident, some artists were already visiting the Western Front in search of new subjects, notably William Rothenstein (as a guest of Belgian Army Headquarters). [1] Early 1916 saw the American Joseph Pennell gaining the British Government's permission to make drawings of munitions factories before any official British war artist had been appointed. Muirhead Bone soon began positioning himself for a similar appointment.

The earliest known recorded statement by Bone regarding a possible post as a war artist dates from 1915, that is, over a year before he was actually to obtain the commission. The statement is in a letter from Bone to D.S. MacColl, where he says: "I have a really great plan to get myself sent out to draw drawings of the war for the Kings Library at Windsor. He doesn't want his records to be simply bound vols. of the "Daily Mirror", surely! I must get at the King somehow (or Queen Mary) and convince him I'm the best man and that it ought to be done - All my drawings and etchings for the next two years - a grand notion!...If I'd been a German the German Government would certainly have got me to do this sort of work." [2] This evidence suggests that Bone saw a commission as most likely coming from King George V rather than the Government, and that Bone's "plan" was initally his own. Importantly, it also suggests that Bone's enthusiasm for the project of a commission as war artist came primarily from a desire to have regular artistic employment during the War. (It was, after all, Bone's inability to gain steady employment at etching in Glasgow and Ayr which precipitated his move to London.) Susan Malvern, though, has been sceptical of Bone's motives, saying that "It is clear that Bone was motivated to seek work as an official artist in order to avoid ordinary conscription." [3] and "It seems that Bone applied himself fairly energetically to the problem of finding an alternative to conscription." [4] Bone certainly made energetic efforts directed towards obtaining the job of first Official War Artist. However, the date, May 1915, implies that Bone, in looking for an artist's post was not seeking to escape military service, as he exceeded the maximum age limit at the time. It was only in 1916, when the age limit rose to 41 (Bone was then 40) that the accusation that he was merely trying to avoid conscription would be valid. Rather, it was primarily supporters of Bone's art who regarded the possibility of Bone being conscripted with anxiety.

Bone's next reference to a possible commission is not until 3 May, 1916 when writing to MacColl. As the letter shows, much seems to have happened in the intervening period. He says "I think it is alright about the Foreign Office job. John Buchan 'phoned my brother last night that Lord Newton was quite enthusiastic about the idea and was warmly approving of the recommendation of Masterman's Committee that I should be used for this work 'drawings of munitions work and probably the front.'" [5] In the year that had passed between Bone's first and second letter to MacColl the commission seems to have changed from Royal- to Government-

instigated, and the persons involved with the project now included men with status and influence: Lord Newton, and John Buchan, the Scots novelist, who had been working for the Government up to that point. Buchan was appointed head of the Department of Information in 1917, which had control over all areas of propaganda. [6] Pressure for a war artist rose two days later with an editorial in The Times on 5 May, 1916, under the heading 'Artists and the War', which argued for-"...a carefully prepared scheme" for artists "under military control" to make studies at the Front, "...the studies would, in time, become pictures, some of them no doubt, great pictures; many might be used for those decorations, celebrating the deeds of local heroes and local regiments, which, in time, should adorn the buildings of our populous towns..." [7]

It was during May that events leading to Bone's appointment accelerated. That same month had seen an auction of blank canvases, to be finished by artists who had donated the canvases and given to the buyers, in aid of the Red Cross. The literary agent, A.P. Watt, had bought one from Bone, and it was during discussion between the two that Bone informed Watt of his expected conscription to the Front. [8] According to Watt, in his letter to Gowers at Wellington House, this was on the 18 May, and he continues "Now it occurs to me here is an opportunity for you to secure Mr. Bone's services for Wellington House. Illustrations by Mr. Muirhead Bone of buildings, etc. at or near the Front, would be a great feature of the new periodical, and, I think, would widen its appeal enormously.// As you are perhaps aware, Mr. Bone's drawings and etchings are to be found in the portfolios of practically all the great Continental Museums. Especially so is this the case in Germany...It is curious that this should be so, for I believe it is a fact that there is no drawing or etching of his in any Museum in his native country, Scotland...I am told that the French Government has already appointed, at any rate, one artist to make drawings and other records of the War area for the Bibliothéque Nationale...Don't you think it would be a good idea if Mr. Bone could be appointed by the Government to make similar drawings and records?...My idea would be to send him in the first place to make a series of drawings of the ruins of Rheims, Arras and other similar bombarded places. In my opinion a series of drawings of Rheims Cathedral, by Muirhead Bone, would be quite priceless, and would probably attract more attention wherever they might be exhibited, than the work of any other living artist." [9]

The basis for the claim made by Watt at the end of his letter regarding Bone's status is hardly exaggerated when we take into account that on the open art market Bone in 1914 was commanding equivalent prices for his prints to Albrecht Dürer. [10] One can be fairly sure that Watt's knowledge of the appointment of a French war artist, and of the fact that Bone was not represented in a Scottish collection was information provided to Watt by Bone himself. Perhaps too was the strategy of adopting Watt rather than Bone himself as the initiator of this idea, presumably on the assumption that the suggestion would carry more weight if coming from another individual.

Whilst Watt was a very conscientious supporter, the matter, although in an advanced state, was as yet far from settled. On the 24 May, Gowers wrote to the Foreign Office using characteristically plain words: "I enclose a copy of a letter from Watt regarding the possibility of the

State using the services of Mr. Muirhead Bone in a more profitable way than sending him out to France to be killed." [11] Further, he picks up Watt's point that the inclusion of a reputable artist would give greater respectability to Wellington House's propaganda publications.

Major Stephen Tallents, from the Ministry of Munitions of War, wrote to Bone saying "I have now seen Dr. Addison, the Parliamentary Secretary of the Ministry of Munitions, who seems very much inclined to offer you an appointment in the Ministry, but asks that I will put forward a rather more definite proposal than I could this afternoon." [12] He then goes on to discuss details over rights to drawings, and pay. This letter indicates that Bone was dealing directly with the Ministry of Munitions as well as indirectly, through Watt and Gowers, with the propaganda department at Wellington House. It also indicates that if Bone had got his commission through the Ministry of Munitions he would have been directed to munitions factories within the United Kingdom rather than the Front.

Campbell Dodgson, Keeper of Prints and Drawings at the British Museum and a personal friend of Bone, wrote to Watt also on the 25 May: "I hear that Mr. Muirhead Bone, being of the age of 40, is liable to military service, and I am strongly of the opinion that a man of his very exceptional artistic gifts would be wasted as a private soldier, and that some employment should be found for an artist whom one may venture to call the foremost living draughtsman...// I am addressing you on this subject, as I hear that you are connected with Mr. Masterman's Committee for influencing opinion in neutral countries...// There is no British [English: deleted] artist whose work is treated with more respect by cultivated opinion in the countries to which it would penetrate...// I should add that a proposal has also been put forward for depositing some portion of such drawings in the Royal Library at Windsor.// Should his Majesty be pleased to interest himself in the scheme, and to forward the appointment of Mr. Bone on such an artistic mission a partition could probably be arranged between the Royal and National Collections in due proportion." [13]

It could be assumed that Bone had asked Dodgson to contact Watt, especially considering that Watt was entirely the appropriate person to liaise with. Dodgson also resurrects the idea of this commission being connected with King George V, first mentioned in Bone's letter to MacColl (14 May 1915), although it should be noted that Dodgson, as Keeper of the National Collection at the British Museum, stood to obtain an extended run of prints and drawings by Muirhead Bone if he was commissioned by the Government rather than the Crown. This letter is another example of Bone utilising influential friends to promote himself to different Government offices as a candidate for the role of war artist.

The following day, 26 May, 1916, Major Tallents wrote to Addison reiterating the idea that Bone, if employed, should make "...drawings of munitions works which would form a unique national record of this side of the war." [14] Bone records, in a letter to MacColl of the same day, the meeting of the 25th May between himself and Major Tallents: "...and when a man in the Ministry of Munitions yesterday asked me to come to lunch and he would explain a lot, I meekly followed and forgot all about our meeting. For he opened an exciting prospect (again confidential!) that I would be

taken on by the Ministry to draw workshop scenes up and down the Country...I think I could quite well take on the joint workshop scenes in England and army doings abroad...Tonight comes the Medical scheme back again! 'Medical Research Committee...we understand you would be willing to undertake drawings in France of pathological specimens for the purposes of the Medical History of the war which is being prepared...'" [15] Bone was obviously aware of dual obligations toward the Home and Western Fronts, as represented by the Ministry of Munitions and Wellington House respectively, and seemed willing to oblige both. This further weakens the suspicion that he would have prefered to escape the Front altogether, as even when the home-based munitions factory work was offered he was still enthusiastic to do drawings in France. (The unrealised offer of work from the Medical Research Committee came in the form of a letter from an H.H. Dale.) [16]

A copy of the letter which Bone received from Tallents was passed to Watt, presumably by Bone himself. We can infer that Bone's intention in passing this letter on was to inform Wellington House, in a gentle manner, that he was being pursued by another Government department, thus increasing his chances of getting an offer from at least one. His tactic was successful, as Watt immediately wrote to Gowers, on the 26th May, concerning Tallents arrangements with Bone: "Here is a copy of Major Tallents' letter to Mr. Muirhead Bone, about which I spoke to you this morning. Would it not be possible for Wellington House to combine with the Ministry of Munitions in this matter? I should be sorry to see the Ministry of Munitions take what I think is a very good thing away from us." [17] Gowers responded by writing a confidential letter the following day to Major Tallents: "I hear you are after Muirhead Bone. So am I. My pursuit has not got very far, I am trying to induce the Foreign Office to join in the chase. Might we not agree to join forces? I don't suppose you want him to spend all his time drawing munitions factories, and drawings by him of (say) Rheims or Ypres at the present time would be of unique historical value, besides their immediate advantage of giving an immense cachet to our illustrated propaganda papers." [18]

Gowers shows, firstly, that he does not view his position regarding Bone as strong enough to insist to Tallents that Bone should give priority to potential propaganda subjects on the Western Front over munitions factory drawings, and given that Bone and Tallents had already met at that point Gowers merely asks that the two bodies arrange to share the services of Bone. On the 30 May an anonymous note to Masterman from the Foreign Office gave Wellington House approval to employ Bone, if the Army Council consented. [19] Events must have moved more quickly at Wellington House than at the Ministry of Munitions. On the 26 May Tallents had written to Allison still positive about "...the suggested appointment of Mr. Muirhead Bone to do drawings of munitions works which would form a unique national record of this side of the war." [20] However by the time Addison wrote to Masterman, less than two weeks later, the commission already seemed lost: "We thought of sending him to draw in some of our munitions works...If this proposal had been carried out there is no doubt that it would have provided a unique war-time record of some of the great munitions factories." [21] The Ministry of Munitions obviously felt that the initiative had been taken from them and that Bone's employment for Wellington House to do work at the Front had been given priority over

munitions factory subjects. It seems, with the enthusiasm exhibited by both departments, that Bone's efforts had been extremely successful in that two government departments were, by May 1916, totally convinced of their need for a war artist whereas before there was no interest by any office in such a service.

Gowers, in a letter of the 5 June, shows that not only was he trying to secure Bone for Wellington House against the Ministry of Munitions but was fending off other suggestions for war artists: Arthur Hacker, R.A., had been forwarded by the Illustrated London News to do drawings at the Front. Gowers rejected the proposal in a letter to the Foreign Office. He says "If we let Arthur Hacker go, we shall have half of the Academy wanting to go. Muirhead Bone is different: he is unique." [22] The reasons for Gowers reluctance to replace Bone for Hacker can be presumed to be that the Treasury had only agree to finance one artist, Bone was not a member of the Royal Academy and that a firm commitment had now been placed with Bone.

In a letter of 27 June, Watt informs Gowers that Mr. Meyer, a partner of Bone's dealers Colnaghi and Obach, had intimated their interest in exhibiting Bone's work to be made at the Front, that is even before Bone had gone out or been officially offered the post. Over June and July Bone's employment was finalised. On the 12 July, 1916 Gowers offered Bone definite confirmation of the job, and on the 15 July Bone replied, accepting his conditions of employment. [23] On the 12 July, Bone immediately wrote to MacColl, obviously delighted at the prospect of going to draw at the Front: "I've got the job alright! The Propaganda Committee of the F.O. have received the sanction of the Treasury and the appointment is being made and I expect my commission next week. I expect to be going out soon." [24]

The events leading up to Bone's eventual appointment show us many interesting factors relating to why Bone should so avidly want this commission and some of the expectations he was expected to fulfil.

Firstly, Bone had established himself extremely quickly as a major artist since his move to London in 1901 thus he was able to draw on formidable and influential support to back his claim, over other artists with influence, such as William Rothenstein, who also could have been considered likely candidates. His seemingly wilful playing-off of two government departments, the Ministry of Munitions and Wellington House, created competition between the two, consequently both proceeded to convince themselves of their need for a war artist.

NOTES

Appendix I. Muirhead Bone's Appointment as Official War Artist

1. Ref. M. and S. Harries, The War Artists. British Official War Art of the Twentieth Century, London: Michael Joseph, 1983, p.4

2. Bone - MacColl correspondence, 14 May, 1915, Glasgow University Special Collections, B 371

3. S. Malvern, Art, Propaganda and Patronage. An History of the Employment of British War Artists 1916-1919, Ph.D. thesis, Reading University, 1981, p.31

4. Ibid., p.32

5. Bone - MacColl correspondence, 3 May, 1916, B 372, op. cit.

6. Ref. M. and S. Harries, op. cit., p.21

7. Cited in S. Malvern, op. cit., p.27-28

8. Introduction to Sir Muirhead Bone. Exhibition of Drawings from the Imperial War Museum and National Maritime Museum, 1966, cited in S. Malvern, op. cit., p.31

9. Watt - Gowers correspondence, 19 May, 1916. Artists at the Front. Muirhead Bone, Vol.1, G4010/27, Imperial War Museum

10. Ref. S. Malvern, op. cit., p.39

11. Gowers - Montgomery correspondence, Artists at the Front. Muirhead Bone, op. cit.

12. Tallents - Bone correspondence, 25 May, 1916, ibid.

13. Dodgson - Watt correspondence, 25 May, 1916, ibid.

14. Tallents - Addison correspondence, 26 May, 1916, ibid.

15. Bone - MacColl correspondence, 26 May, 1916, op. cit.

16. Dale - Bone correspondence, 26 May, 1916. Artists at the Front. Muirhead Bone, op.cit.

17. Watt - Gowers correspondence, 26 May, 1916, ibid.

18. Gowers - Tallents correspondence, 27 May, 1916, ibid.

19. Correspondence in Artists at the Front. Muirhead Bone, ibid.

20. Tallents - Addison correspondence, 26 May, 1916, ibid.

21. Addison - Masterman correspondence, 8 June, 1916, ibid.

22. Gowers - Montgomery correspondence, News General, No.109077, Foreign Office, 395.47, Public Records Office. Cited in S. Malvern, op cit., p.33

23. Gowers - Bone correspondence, 12 July, 1916, Artists at the Front. Muirhead Bone, op. cit.

24. Bone - MacColl correspondence, 12 July, 1916, op.-cit.

APPENDIX II

THE FUTURIST PAINTINGS OF STANLEY CURSITER

Stanley Cursiter's (1887-1976) brief adoption of a Futurist style, represented by a group of paintings produced in 1913, is an isolated though relevant example of how painting in Scotland tackled the modern world. They demonstrate clearly the contact which a young artist had with a progressive Modernist style in the early part of the century, though due to the lack of explicitly industrial subject matter and the brevity of Cursiter's experimentation along this path, this section is included as an appendix only.

In his early life, Cursiter experienced, like Muirhead Bone, an architectural training before gaining any exposure to the fine arts. In 1899, as a young boy, he studied mechanical drawing and advanced building construction, under the engineer H.F. Bowen, with the view to a career in architecture. [1] He says of Bowen that he "...had the most far-reaching influence on my young life." [2] In this training he learnt to draw accurately and with patience using set squares and other technical drawing instruments. A certain methodical approach became vital to his development and pertinent to his interpretation of Futurism. This is re-iterated in his recalling, from his early life, "Someone gave me a copy of Ruskin's 'Elements of Drawing', and I enthusiastically worked my way through all the exercises prescribed." [3]

Cursiter started a five year design apprenticeship in Edinburgh at the firm of Messrs. McLagan and Cumming, chromo-lithographers and printers, in 1904. There he learned commercial printing techniques, lithography, witnessed high-quality reproduction printing, and explored photography. As in his training in mechanical drawing and construction, he would have developed his awareness of the industrial aspect to printing before the awareness of how it could be used as an art medium.

He also attended evening classes in drawing, painting and design at Edinburgh College of Art, which he describes thus: "...in Drawing and Painting, we had a group of teachers with all the exacting demands of the South Kensington College of Art as their background. Precision and accuracy were the only standards." [4] This precision again seems to have infused his Futurist art of 1913.

During Cursiter's attendance at a six week course at the Royal College of Art, London he had, as he describes it, "...the phenomenal luck to come under W.R. Lethaby, one of the great teachers of his time, so my short course at South Kensington was a very real inspiration." [5] Lethaby, as one of the major figures in the Arts and Crafts Movement, was influential on others discussed in this thesis, such as Patrick Geddes and William Johnstone, and provides another direct link with Scottish art practice. Continuing Lethaby's interest in how art and industry might usefully interact, Cursiter was also the author of a book entitled Art in Industry (1943) which looked at the uses of art and design within an mass-producing industrial context. [6]

Clearly Futurism represents one of the most provocative movements in early twentieth-century art and the first to devote itself entirely to themes of contemporary experience, modernisation and industry. In Part Two, Chapter 2 the tangential relationship between Futurism and Muirhead Bone was discussed, but Stanley Cursiter's work over 1913 explicitly adopts the Futurist manner.

These works were painted when Cursiter was still a young man of twenty six years. The total works in this idiom are: Tea Room, Synthesis of the Supper Room at an Arts Club Reception, The Sensation of Crossing the Street - The West End Edinburgh **[Fig. 103]**, Princes Street on Saturday Morning **[Fig. 104]**, Princes Street in the Rain **[Fig. 105]**, The Ribbon Counter and The Regatta.

One important source of information on these paintings is the correspondence between the artist and William Hardie. [7] In this, Cursiter wrote: "For your amusement I enclose three photographs of pictures painted in 1913 - these were I suppose influenced by the Post Impressionist Exhibition at the S.S.A." [8] Roger Fry's first major Post Impressionist exhibition referred to by Cursiter was shown at the Grafton Gallery. The most fullsome account of Cursiter's first contact with these works and his initiating their coming to Scotland is contained in the artist's autobiography Looking Back: "In the days of the first Post-Impressionist Exhibition (1911) I was staying with the Williamsons [Family friends resident in Hamstead.] One day I went to the Grafton Gallery early in the morning. I got the shock of my life. Here was painting and colour as I had never imagined it. After lunch I rushed to the Tate Gallery to see the Pre-Raphaelites. I had always thought of them as colourists, but now they looked like chromo-lithographs. So I went back to the Grafton and stayed until the Gallery closed. That evening, when asked what I had been doing, I said that I had spent the whole day in the Grafton Galleries. My friends were profoundly shocked. Dr. Williamson insisted that I should take him to the Grafton the next day, so that I could explain why I liked these revolutionary pictures. I did, and he at least ceased to regard them with contempt. By an extraordinary chance, while we were in the Gallery, Roger Fry and Clive Bell came in. They had arranged the exhibition. Dr. Williamson introduced me and I immediately made a tentative proposal that we might receive a selection of the pictures to show at the next exhibition of the Society of Scottish Artists. The exhibition was arranged and we received about twenty pictures. It nearly wrecked the S.S.A.! But the Society survived the shock, and it remains a landmark as the year when Cezanne [sic], Van Gogh and Gauguin were first seen in Scotland." [9] Here is evidence firstly of Cursiter's enthusiasm as a young artist of twenty five for the most avant garde Modernist styles available in Britain, and secondly of an enterprising spirit in requesting to allow the exhibition to come to Scotland.

The catalogue produced for the 1913 exhibition at the Royal Scottish Academy of the Society of Scottish Artists makes no reference to this special inclusion of major French artists of the Post-Impressionist period. The most significant works as far as Cursiter was concerned were Train at Full Speed by Luigi Russolo and *Le Boulevard* by Gino Severini. Some of the other works were lent by the Bernheim, Jeune and Cie Gallery which was the venue for the first Futurist exhibition in Paris in 1912. All the

works were integrated with the regular S.S.A. exhibitors. Cursiter exhibited four works, most significantly Crossing the Street, the West-End (No.350) which was for sale for £20. The others were not industrial or modern subjects, entitled The Mirror (No.285), A Studio Corner (No.262) and Summer in Shetland (No.17). The inclusion of these latter three demonstrates that Cursiter did not abandon his earlier representional manner whilst painting his Futurist works. The ambition and confidence of this young artist is explicitly demonstrated in his exhibiting Crossing the Street in the very same show as those who directly influenced him. He would have been one of the few to have shown any awareness of what these European artists were doing and going further by displaying this fact in front of his contemporaries. [10]

Following the 1913 exhibition the S.S.A. largely returned to its normal practices. Cursiter did show Supper-Room (No.229) and Tea-Room (No.233) in the 21st annual exhibition, alongside a non-Futurist work, The Nave, St. Magnus Cathedral, Kirkwall. In the 1915 annual show, Muirhead Bone showed four works, three of which are of industrial or semi-industrial subjects: St. Rollox (No.284) **[Fig. 17]**, The Old Jail, South Front, Glasgow (No.285), Trace Horses in a Fog (No.286), and Port Dundas, Canal (No.287). This increased inclusion of industrial subjects may, in part, be related to the S.S.A. recognising the importance of modern subjects in the context of them previously exhibiting the Futurists' work.

Other possible sources through which Cursiter may have become familiar first hand with Futurist works, and unmentioned by the artist in his correspondence with Hardie, were the 1912 Futurist exhibition at the Sackville Gallery, London and the Severini exhibition of 1913 at the Marlborough Gallery, London, both of which he could have seen during his stays in London around this time. [11] Certainly Cursiter's paintings of 1913 refer to the work of Futurists such as Boccioni and Severini rather than the work of the Post Impressionists shown in Fry's exhibition.

Two of the oil paintings remain unfinished: The Regatta and Princes Street on Saturday Morning. The second work especially reveals Cursiter's technique of systematically covering the canvas with small divisions, giving an over-all, lattice-work construction to this series. A red and blue stripped material, originating in an awning on the Royal Scottish Academy building, which occupies part of the foreground, is picked up in other areas of the canvas, thus gaining an independence from representation. There is a multiplicity of views here as we seem to look at three-quarter view on the facade and right hand wall of the Royal Scottish Academy whilst at the same time looking up to Edinburgh Castle behind it. In reality this would involve facing two different ways at once. Similarly, we look into a motor car in the foreground, yet look on at other cars going away from the spectator's viewpoint. Even the inclusion of cars shows Cursiter's desire to depict these new forms of technology which were by then appearing on the streets of Edinburgh. The heads of the male figures are seen as block-like objects, thus emphasising a sculptural and almost robotic quality which complements the systematised, geometric organisation of the rest of the painting. In contrast to the male figures, the women are delineated with a softer line, the arabesque of a hat allowing a gracefulness absent in the men. The picture seems to be unfinished although Cursiter has signed it. There are

unpainted passages on the bottom left-hand-side which reveal that Cursiter drew all the blocks out in pencil before systematically filling in each element as he progressed across the canvas.

Some of the aesthetic devices of this painting anticipate concerns of a few years later in his wartime occupation. During the First World War, due to illness, Cursiter was allocated to the Mapping Division, and then to the Map Printing Unit in France. He invested his knowledge and enthusiasm for practical engineering by developing an aerial photographic mechanism which enabled reconnaissance photographs to be taken perpendicular to the ground thereby eradicating the distorting effects of perspective. [12] His map-making enterprises were described thus: "Here, in a curious way, my early experiences of photography, together with my special study of perspective at the College of Art, allowed me to suggest a simple photographic way of correcting, within limits, the perspective distortion on aeroplane photographs..." [13] Cursiter's early familiarity with photography was engendered by his father, an enthusiastic amateur photographer, whose "...interest in photography was stimulating" for his son. [14] Cursiter's Futurist works can be seen as as preceding, in a more subversive fashion, wartime concerns related to map-making. The paintings, especially Princes Street on a Saturday Morning, manipulate the aesthetics of photography, in that they are relatively precise and representational, yet involve a conscious and deliberate conflation of different perspectives.

Only in The Regatta and The Ribbon Counter does he allow a full rhythmic design to traverse the composition. The first of these, The Regatta, seems to look out from the deck of a flagship, overlooking at least four boats. The repeated motif of the cream coloured sails suggest movement from right to left and may refer obliquely to one boat in successive stages. If so this would relate more closely than the other more static compositions in his series to a true Futurist aesthetic, predicated on simultaneity of experience. In the foreground passages, Cursiter makes possibly a comic pun between the attenuated triangle forms of the sails and the heads of two women to the right of the composition. Overall, the structure of the pictorial elements are predominantly consistent with conventional representation, each occupying a three-dimensional space. This is a characteristic less evident in most of the other works.

The one exception to this is The Ribbon Counter, which straddles the rythmic movement of The Regatta and the patchwork of the other paintings. Both The Ribbon Counter and The Regatta are of genteel subjects compared to the others in the series. The Ribbon Counter is a consumer-centred subject (the sales counter of an Edinburgh shop), whilst The Regatta represents an aristocratic form of leisure, paralleled with the type of subject sought out by the Impressionists in the 1860s and 1870s. Neither are of industrial or urban experience. The pointillist treatment of the sky in The Regatta is reminiscent of Seurat, who's *La Grand Jatte* (1886) also represents in terms of subject a close precedent. The Ribbon Counter is more confidently impastoed in its use of colour but, if it is a late work in the series, is less truly Futurist in that the depiction of space is fairly consistent. Simultaneity of experience is negated in that the saleswoman and customer communicate clearly with each other in a narrative

fashion. Ultimately, a Futurist style is merely superimposed on an already established scene, enhancing the feeling of chaos and vibrancy.

Many of Cursiter's subjects in his Futurist pictures focus on interior and exterior situations, involving a multitude of visual impressions, for example, Synthesis of the Supper Room at an Arts Club Reception and The Sensation of Crossing the Street. In this connection, that of trying to paint convincingly complex subjects, Cursiter may very well have been looking at the example of Muirhead Bone, whose exacting technique in drawing and etching was well able to evoke detail and confusion, whilst maintaining visual order. Much later, in 1942, Cursiter wrote that Bone had an "...uncanny gift in rendering architectural complexities, the bustle of shipyards and the picturesque in engineering..." [15] It is architectural complexity and bustle which Cursiter also tackles, albeit of an urban environment rather than an industrial one, and with the aim to articulate, in psychological terms, the confusion of the city as experienced by the individual, rather than in Bone's case, to interpret visually urban industrialisation as such. Despite the fact that Edinburgh's economic base was traditionally removed from heavy industry, in contrast to Glasgow, as a city centre Edinburgh was extremely stimulating as a visual experience. Cursiter responded to the city as a source for wide-ranging and inter-relating experiences. Raymond Williams accurately describes this outlook in The Country and the City (1973): "Fragmentary experience...is deeply related to several characteristic forms of modern imagery, most evident in painting and especially in film...There is indeed a direct relation between the motion picture, especially in its development in cutting and montage, and the characteristic movement of an observer in the close and miscellaneous environment of the streets...This experience of urban movement has been used, at all levels of seriousness and of play, to express a gamut of feelings from despair to delight." [16] Cursiter seems to be more interested in expressing the city in positive terms and exploits the fragmentary aesthetic of Cubist and Futurist painting to this end, rather than concentrating upon "fragmentary experience" within the city as alienating and disorientating.

All of Cursiter's Futurist paintings listed above use multiple viewpoints derived from Cubism, yet in The Sensation of Crossing the Street - The West End Edinburgh, this is particularly heightened in order that the activity of the picture surface expresses the activity of the centre of Edinburgh. A key influence seems to be *Le Boulevard* by Severini, which was shown both in the London and Edinburgh exhibitions. Like the Futurists, Cursiter was trying to find an adequate visual equivalent to express the experience of a pedestrian within the modern city. The small broken units which Cursiter uses to construct The Sensation of Crossing the Street are more hard-edged and geometrical in their brushwork compared to that which the Futurists developed after contact with Cubism in Paris. Cursiter's hard-edged, built-up surface tends to flatten the picture space and emphasise instead pictorial qualities and strength of design. It is these qualities, rather than an identifiably analytical style, which separates Cursiter from an artist such as Bone, who maintains more distance between his subject in his attempt to understand it visually.

Further analysis of the content of Sensation of Crossing the Street reveals that there is a backdrop of buildings located along the top area

of the painting, in front of which the main drama is depicted. The relatively conventional buildings in the background are reminiscent of the scaffolded buildings in Boccioni's The City Rises, where the more distorted, mannered horse in the foreground is situated before a conventional city construction. In order to emphasise the visual complexity and confusion of the scene, Cursiter paints reflected details in the windows of the trams. The clock, which remains almost intact amongst the tiny geometrical shapes, clearly operates as a device to alude to the passing of time, or may function to particularise the series of moments the painting represents. A final subject of note is the centrality of the young woman in the foreground, who, like the clock, is rendered coherently in comparison to her surroundings. Her expression is one of calm, and the coherency with which Cursiter paints her operates as an hiatus in contrast to the minute details which cover most of the canvas. A possible parallel in the visual arts may be found in Fernand Léger's The Wedding (1911) where the female central subject, much more abstracted in Léger's work than Cursiter's, functions as the pivot around which a multiplicity of semi-representational objects revolve.

The possibility that Cursiter had seen, either first hand or in reproduction, Futurist works other than those shown in the S.S.A. show remains high. This is evidenced especially in Rain on Princes Street. Martin Forrest has already pointed out the visual similarity between the metalworked lamp-posts and Boccioni's sculpture Unique Forms of Continuity in Space (1913). [17] Similarly, the general treatment of this urban subject, the concentration on a tram as the dominant subject, and the way in which the light emanates from the street lamps along the right hand side echo the style of Carra's paintings, particularly *Ciò che mi ha detto il tram* (1912). To the left of the composition are relatively conventional depictions of objects which specifically locate this subject as in a modern city: the trams, their electric lights reflecting off the wet road and what seems to be a letter box. The criss-crossing of the black and white umbrellas evoke a semi-abstract space which partly reads as movement. The result is a deceptively complex picture.

Cursiter's Impressionist-based handling employs quite a high colour range, not always associated with the more sombre, romantic colours of Boccioni, although perhaps more in sympathy with Severini. In this respect, with its positive use of bright colours, Cursiter's series relates more closely to the Portsmouth shipyard series that J.D. Fergusson was to do in 1917 (see Part Two, Chapter 3).

In The Sensation of Crossing the Street Cursiter establishes a rigid structure using trams and buildings and figures. Such a 'constructive' method of picture composition may relate to Cursiter's early technical training. Also, perhaps due to him being younger than Bone, he was more sympathetic to a Modernist style of painting and so felt able to exploit it rather than follow the ostensibly more traditional aesthetic which Bone inherited. Yet both artists were interested in exploring apects of urban experience rarely examined by the majority of artists. For Bone this was through a rigourous draughtsmanship, whereas Cursiter's urban subjects were rigourously explored through a Modernist style of painting.

The National Library of Scotland holds a sketchbook by Cursiter which has pages with pencil drawings made over his Futurist period. **[Fig. 106]** [18] One sketch represents a railway subject entitled The Arrival of a Train and clearly owes a strong debt to Boccioni's States of Mind triptych. There also exist other variations for Sensation of Crossing the Street as well as simpler blocked out sketches stylistically reminiscent of Léger. Other sketches employ numbers inside the image, such as one which has '3-4-5' across it. The minuteness of the many sketches which fill two sides of the sketchbook illustrate Cursiter's characteristically methodical approach and predeliction for careful planning.

The order in which Cursiter painted his Futurist series is open to some question. The sketchbook discussed above shows that many of the works were considered at the same time, presumably as a result of working quickly and exploratorily under the initial enthusiasm engendered by the Post-Impressionist exhibition. Hardie quotes Cursiter in correspondence saying: "I do not remember the precise order in which the pictures were painted - but 'Rain' was certainly painted after 'Crossing the Street'. 'Crossing the Street' was one of the first. The pictures my daughter has [Tea Room, Synthesis of the Supper Room at an Arts Club Reception, The Regatta, and The Ribbon Counter] may be earlier." [19] Hardie suggests that the two interiors be placed first, followed by the Princes Street works then The Regatta. Certainly the two interiors seem more conventional in their articulation of space than the Princes Street works, yet the fact that they were exhibited at the 1914 S.S.A. annual exhibition may indicate that they were done after The Sensation of Crossing the Street which was shown the year before. This would be stylistically consistent with the fact that The Regatta and The Ribbon Counter do not explore space in such a radical way as the Princes Street group and therefore seem to fit better with the two interior scenes. This chronology would present Cursiter in effect retreating from a radical treatment of Futurism in his later Futurist works towards a more conventional approach. This is understandable as one would expect Cursiter's first efforts to be the most enthusiastic and therefore most extreme. Once his over-riding methodical approach took hold his stylistic innovations became less adventurous. Although it remains most likely that Cursiter worked on more than one canvas at a time, and therefore a final chronology remains elusive.

Cursiter's adoption of a Futurist manner did not continue, as he wrote to Hardie: "The War came and I departed for the Somme. After the War I was diverted from 'abstracts'..." [20] and "...I have always kept them as I thought they had something to say. All my later work was of a more conventional character - I became a portrait painter more or less by accident." [21] Although Cursiter seems not to be explicit about his reasons for neglecting this style other than the interuption which the War represented, it seems that the benefits, through patronage, allowed to portrait painters may have proved too much to resist, when the more difficult alternative was to continue in a modern style. Cursiter diverted into more lucrative markets in portraiture and landscape, which resulted in works such as Phyllis (1919) and Cassis - Evening (1920), for example. Again in the work of Cursiter, as with many Scottish artists, the pressures of patronage

were enough to divert a serious artist from a pioneering area within Modernism.

The significance of Cursiter's work of 1913, whilst inherently interesting, is rather that it tells us more about the fate of avant garde styles in Scotland than that of Futurism itself. The First World War not only interupted artistic development all over - Western Europe, but subsequently made the aggressively positive doctrine represented by Futurism untenable in a society which had just experienced the new extremes of modern warfare.

To summarise, stylistically speaking Cursiter's works are certainly Futurist in broad intention, yet it should be emphasised that he seems never to have called his works "Futurist", instead refering to them as either "abstracts", or "Post-Impressionist". Viewing Cursiter's art in context would indicate that he never intended in his work to take on the theoretical implications of Futurism or of a machine aesthetic. Yet what remains is an imaginative interpretation of this style of painting and a unique example of Futurism in Scotland.

NOTES
Appendix II. The Futurist Paintings of Stanley Cursiter

1. Looking Back. A Book of Reminiscences, Edinburgh: Econoprint, 1974, p.4-5

2. Ibid., p.5

3. Ibid., p.4

4. Ibid., p.7

5. Ibid., p.8

6. S. Cursiter, Art in Industry, Saltire Pamphlets, No.4, Edinburgh: Saltire Society / Oliver and Boyd, 1943

7. Ref. "A Note on the Futurist Paintings of Stanley Cursiter", Stanley Cursiter Centenary Exhibition, Piers Art Centre, Stromness, 1987

8. Cursiter - Hardie Correspondence, 18 November, 1973. This correspondence is now deposited at the National Library of Scotland.

9. Looking Back, op. cit., p.44. The complete list of works borrowed from the Second Impressionist Exhibition are as follows:

No. 176 *L'Esprit Vielle* Paul Gauguin
249 Pamela Duncan Grant
259 *Les Aubergines* Henri Matisse
260 Train at Full Speed Luigi Russolo
261 *Poèmes Barbares* Paul Gauguin
265 *"Imploration"* Paul Sérusier
267 *Le Boulevard* Gino Severini
271 Maison dans les Arbres Paul Cézanne
274 The Apennines Roger Fry
319 *L'homme a la Veste* Vincent Van Gogh
358 A Cascade Roger Fry

In Case VI:

A. *Le Ravin* Vincent Van Gogh
B. *Le Mont Valérin* Maurice Vlaminck
C. *Femme tenant une coupe* Pablo Picasso
D. Cubist Picture Pablo Picasso
E. Study of the Nude Auguste Herbin
F. *Arbres et Maison* Auguste Herbin

10. Other works exhibited and relevant to the theme of art and industry are *La Cité* by John R. Barclay (No.252. Barclay also etched a subject entitled The Foundry) and The City of Transfiguration by W.W. Peploe (No.383).

11. Cited in Looking Back, op. cit., p.12

12. Described ibid., p.9-14

13. Ibid., p.45

14. Ibid., p.41

15. The Arts in Scotland, (Scotland and its People, No.11), Edinburgh: Oliver and Boyd, p.18

16. R. Williams, The Country and the City, London: Chatto and Windus, 1973, p.242

17. M. Forrest, typescript of lecture, 1989

18. National Library of Scotland, Acc. 5451, Box 1

19. Ref. Cursiter - Hardie correspondence, 23 November, 1974. The pictures referred to are Tea Room, Synthesis of the Supper Room at an Arts Club Reception, The Regatta and The Ribbon Counter.

20. Ibid. Letter dated 18 November, 1973

21. Ibid. Letter dated 23 November, 1974

APPENDIX III

The Exhibition of Scottish Art, Royal Academy, 1939

Considering the vital role which industry has played in Scotland's history it seems surprising that it is not a more prominent theme in Scottish art (or indeed in many other countries equally transformed through industrialisation). The tastes and requirements of patrons are certainly of major significance here yet also is the lack of disseminated discussion on industrial subjects dating from the beginning of industrialisation to the present day. Clearly if artists are not aware of previous explorations into the subject due to lack of prominence, their own endeavours may suffer as a result. The discouraging effects of working in isolation also make it difficult to work consistently and with a sense of tradition. If artists had available to them a sense of the history of this subject, a more informed and widely dispersed approach might emerge.

As an example of the way in which Scottish art has presented itself, the major Exhibition of Scottish Art at the Royal Academy, London in 1939 is informative and significant especially as it sits almost precisely in the mid-point of the century under discussion. It also occured at a time when there was much discussion in Scotland concerning the nature of Scottish art and the relationship between art and industry, represented by the writings of Ian Finlay, J.D. Fergusson and Hugh MacDiarmid, discussed in Part One, Chapters 3 and 4. The exhibition was prepared chiefly by Stanley Cursiter and Sir James Caw (Director and former Director of the National Gallery of Scotland respectively). In the context of the present discussion it is notable because it contained no true examples of industrial subjects although its remit was "...to bring together a collection which is fully representative of the essential character and successive phases of Scottish art." [1] The implication in terms of this omission was that over three hundred years of change, turmoil, modernisation and decline Scottish artists had entirely failed to register the Industrial Revolution and its consequences. As has been stated in the Introduction, the extent to which artists of the earlier part of the nineteenth century did respond to industrialisation is beyond the remit of this thesis, however it is clear that as far as the Royal Academy exhibition was concerned the broad cultural context from which this exhibition sprang was characterised by a number of factors including, for example, the portrait painting of Sir Henry Raeburn, the landscape painting of John Thomson of Duddingston and William McTaggart, and the poetry of Robert Burns and Sir Walter Scott. Such figures clearly have a major place in Scottish culture but, in the context here, represent a debilitating generalisation which has served to dislocate artistic language being developed by Scottish artists over that period and the industrial reality which was at the same time transforming Scotland. This was a dislocation which most of the artists of the past century, discussed here, have inherited from their predecessors.

Figures directly and indirectly relevant to the thesis were involved in the organisation of the Exhibition of Scottish Art, notably Stanley Cursiter (chief organiser), Muirhead Bone, Francis Dodd and D.S. MacColl (all of whom were on the London Executive Committee) and D.Y. Cameron (on the

Scottish Executive Committee). It would seem that all the artists on the selection committees were not eligible for inclusion in the exhibition itself, resulting in the exclusion of the Scots printmakers following the British Etching Revival who collectively made a considerable contribution to the treatment of industrial subjects. Cursiter was in a similar position, and at that time did not rate his 'Futurist' works of around 1913 as important (see Appendix II). Caw makes it quite clear in his introduction that the standard by which the artists for inclusion were judged was their facility for embodying the traditional qualities of Scottish art. These artists "...have informed their realistic treatment with sentiment, insight and charm. Moreover, the painters as a whole, if somewhat lacking in the gift of more formal design, have possessed a natural faculty for pleasing and unifying pictorial arrangement, and have shown much technical dexterity, a fine sense of the character of their medium in touch and tone, and exceptional feeling for colour." [3] When a modern subject was selected, for example, William Kennedy's Stirling Station (1890-3) (No.337) the ostensibly industrial image of train passengers on the platform at dusk was treated in the manner of a picturesque form of Victorian genre painting. Two maritime subjects, D.O. Hill's Leith Pier (undated) (No.201) and David Muirhead's Boatbuilding Yard, Brightlingsea (1923) (No.629) depict pre-industrial wooden boats. The only work of direct relevance in the inclusion of John Runciman's Netherbow Port, Edinburgh (1764) (No.799a) which has already been cited as a possible inspiration for Muirhead Bone's demolition subjects (see Part Two, Chapter 2). Runciman's work may even have been chosen by Bone through his position on the London Executive Committee. Another work of secondary interest is John Quinton Pringle's Muslim Street, Bridgeton (1893) (No.361), which depicts the smokey East End of Glasgow with its factory chimneys set against a gloomy horizon.

Thus the seriously deficient representation of industrial subjects in a prestigious historical show of a country at the forefront of the Industrial Revolution is in itself significant. Firstly, the genres of industrial subjects were not recognised at a high level and, secondly, this meant that images of Scottish industry were not available to subsequent contemporary artists who might wish to engage industrial subjects. The history of Scottish art was presented by the selectors as having no significant connection with the history of Scotland after the Industrial Revolution. The analysis of the complex parameters which governed this prestigious exhibition gives a useful insight into general cultural questions which lie at the foundation of any discussion of Scottish art, whilst specifically illustrating the problems which beset artists who were interested in industrial themes and had to work within established practices.

NOTES

Appendix III. The Exhibition of Scottish Art, 1939

1. James Caw, 'Introduction: Scottish Painting and Sculpture', London: Royal Academy, 1939, p.x

2. Ibid., p.xv

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